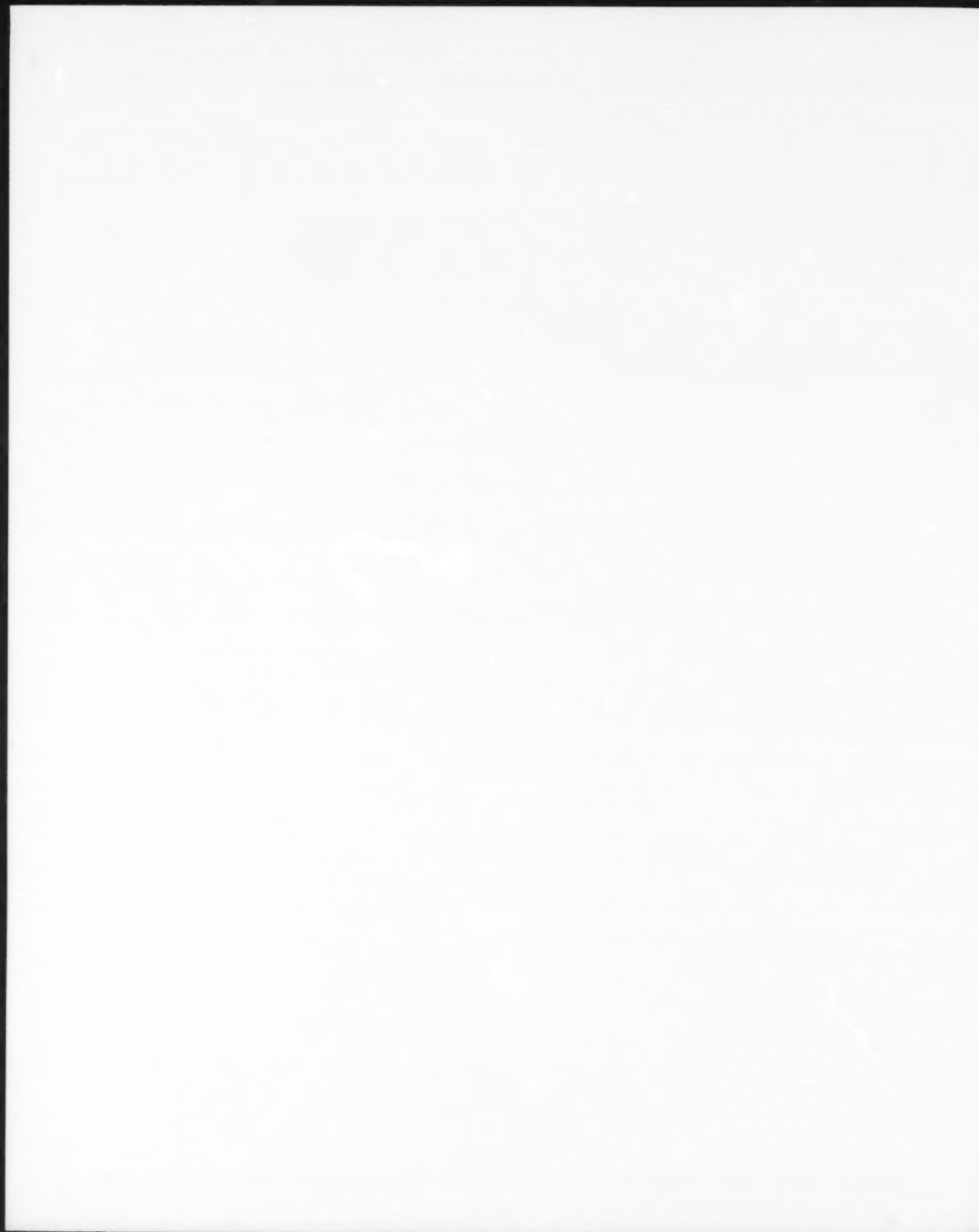

Manitoba 

**Annual Report
1986 - 87**

Agriculture



Manitoba



Minister of Agriculture

Room 165
Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8

To His Honour,
George Johnson,
Lieutenant Governor for
the Province of Manitoba

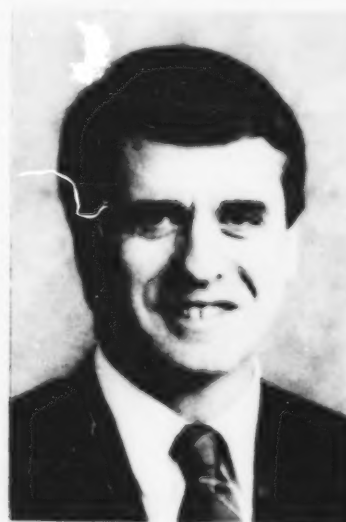
Your Honour:

I have the honour to submit herewith the Report of the Department of the Agriculture for the period April 1, 1986 to March 31, 1987.

Yours truly,

A handwritten signature in cursive script, reading "L. E. Harapiak".

Leonard E. Harapiak,
Minister of Agriculture





Manitoba



Deputy Minister of
Agriculture

Room 159
Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8
(204) 945-3734

Honourable Leonard E. Harapiak
Minister of Agriculture
Province of Manitoba

Sir:

It is my pleasure to present the annual report of the Manitoba Department of Agriculture for the twelve month period ending March 31, 1987.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'G. J. Lacombe', written in a cursive style.

G. J. Lacombe
Acting Deputy Minister



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Manitoba Agriculture

Executive and Directors

April 1, 1986 to March 31, 1987

Executive

Honourable Bill Uruski, Minister

G. J. Gartner, Deputy Minister

T. L. Pringle, Assistant Deputy Minister
Agricultural Development and
Marketing Division

G. J. Lacomby, Assistant Deputy Minister
Management and Operations Division

C. Lee, Assistant Deputy Minister
Policy and Economics Division

B. Dryburgh, Policy and Program
Coordinator

Directors

Administrative and Accounting Services —
R. L. Baseraba

Agricultural Crown Lands — J. L. Neabel

Animal Industry — F. P. Baker

Communications — V. E. McNair

Economics — H. Campbell

Marketing — A. E. Gascoigne

Personnel Services — D. H. Burch

Soils and Crops — G. D. Webster

Technical Services & Training — R. M. Deveson

Veterinary Services — J. A. McPhedran

Manitoba Natural Products Marketing Council —
G. H. McKenzie

Manitoba Water Services Board — W. E. Griffin

Central — B. F. Manning

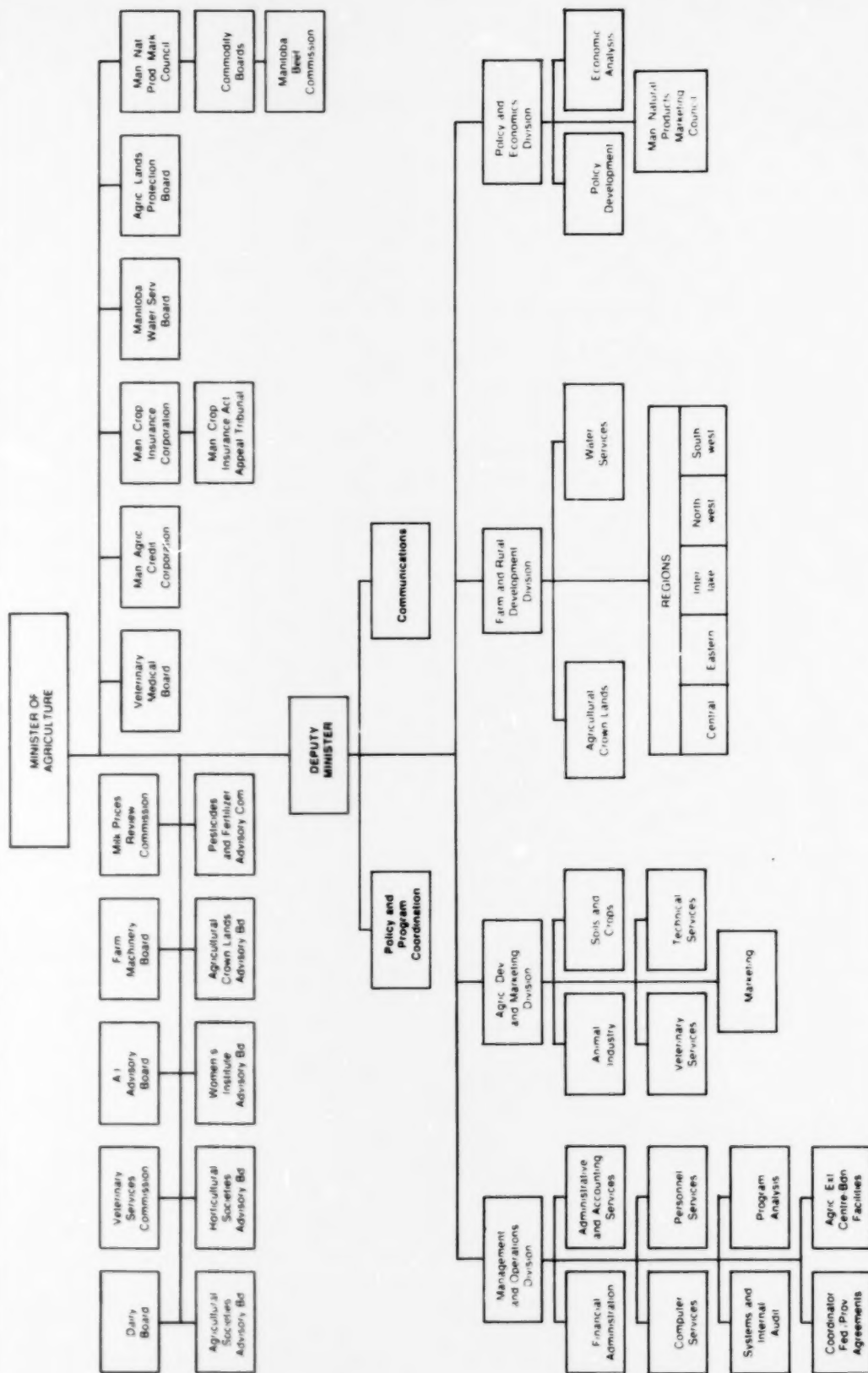
Eastern — D. I. Donaghy

Interlake — A. T. Dickson

Northwest — R. Chychota

Southwest — W. Digby

Organization Chart — Manitoba Agriculture



General Administration

Manitoba Natural Products Marketing Council

The objective of the Manitoba Natural Products Marketing Council is to ensure the effective control, regulation and promotion of agricultural products designated within the marketing plans of seven producer-elected boards and three appointed marketing commissions. The Manitoba Council supervises the activities of these marketing agencies and serves as an appeal body for any person affected by the decisions of marketing boards or commissions.

Membership in the Manitoba Council was changed with two new members being appointed effective January 15th, 1987. The Manitoba Council convened eighteen regular meetings in 1986/87 and its involvement with each of the producer boards and marketing commissions is highlighted below.

The Manitoba Beef Commission — The Manitoba Council approved two levy regulations for the Commission as well as assisting in the drafting of an Information Order. In addition, the Manitoba Council appointed three inspectors under the Act to inspect the books and records of individual registered producers, auction marts and processing facilities. The Manitoba Council heard seven appeals against the decisions of the Commission with all seven being dismissed.

The Manitoba Broiler Hatching Egg Commission — The Canadian Broiler Hatching Egg Marketing Agency was established on December 1, 1986 with the Manitoba Council as a signatory to the Federal/Provincial Agreement. The Manitoba Council participated in the review of the various initial drafts of delegation of authority and administrative regulations for the Agency.

The Manitoba Chicken Broiler Producers' Marketing Board — The Manitoba Council met with the complete Board of Directors to discuss a number of administrative issues as well as Council's supervisory role. The Manitoba Council did approve an amendment to the Board's quota order to allow quotas to be expressed in annual allotments rather than cyclical allotments (6-9 week cycles), and also approved an amendment to the Board's penalty levies regulation to allow a 5% variation in final market weights before applying the over-production penalty of 25¢ per kilogram. The Manitoba Council encouraged the Board to establish an industry committee to determine the most appropriate ways to utilize Manitoba's 1987 allocation.

The Manitoba Egg Producers' Marketing Board — The Manitoba Council approved a major revision to the Board's administration by-law incorporating conflict of interest guidelines and a clear description of the duties

and authorities of members of the Executive Committee. In addition, the Board implemented an egg quality control program by means of a directed marketing order which permits the Board to direct eggs to the breaking plants in cases where eggs are not suitable for grading. The Manitoba Council successfully prosecuted one producer for obstruction of an inspector. The Manitoba Council heard one appeal against this Board and the appeal was dismissed.

The Manitoba Hog Producers' Marketing Board — The Manitoba Council's involvement with the Board was limited to discussions relating to the acceptance of district nominations and election procedures. This issue continues to be under review between the Manitoba Council and the Board.

The Manitoba Honey Marketing Board — There was no discussion of issues which involved the Board and the Manitoba Council. The Board did file a revised pricing order on November 20, 1986.

The Manitoba Milk Producers' Marketing Board — Extensive discussions took place between the Manitoba Council and the Board regarding a milk quota transfer policy. Eight meetings with representatives of the Board culminated in the development of the retirement quota re-distribution system, which became effective October 1, 1986. There were five appeals heard against the Board, three being granted and two dismissed.

The Manitoba Turkey Producers' Marketing Board — The Manitoba Council monitored several new programs introduced by the Board such as the winter tom incentive program and the national turkey breeder policy and advised the Board on matters relating to a revised quota order. The Manitoba Council met twice with the complete board of directors, to discuss a number of administrative matters and Council's supervisory role. The Manitoba Council questioned certain processing agreements between processors and producers and the Board took steps to insure that all payments to producers were distributed in accordance with the Board's Pooling Order.

The Manitoba Vegetable Producers' Marketing Board — Two issues involved the Manitoba Council's participation, the first one being an amendment to the quota order filed August 7, 1986 raising the maximum allotment of carrot quotas to 1,500 tons from 1,100 tons annually. The second issue related to the proposed establishment of a National Potato Marketing Agency. There were essentially four concerns with the proposal and these concerns were addressed in a brief prepared jointly with the Board and forwarded to the National Farm Products Marketing Council.

Management Services

Administrative and Accounting Services

The Branch concentrates its service in providing professional management, accounting, financial and administrative support to all department programs and executive management. Ongoing services include financial analysis, general management consultation, system design, payment documentation, expenditure recording, revenue collection and analysis and provision of management information for decision making in program development and administration. The coordination of summer student recruitment, records management, office space and equipment administration and telecommunications services also continue as service activities.

During the year, 23,171 payment documents were processed totaling \$67,679,526. In addition 1,480 requisitions were authorized for office supplies and equipment services.

Purchasing transactions resulted in 431 orders being processed and an additional 766 direct purchase orders were issued.

Revenue transactions for \$8,626,593 collected as fees, shared-cost receipts, etc., were also processed.

During the year approximately 60 contracts were prepared and processed mainly for the Agri-Food programs throughout the Province. In addition, 97 summer student positions including both S.T.E.P. and budget positions were expedited.

As its primary goal, the Branch continued its efforts of providing services coinciding with program area goals and objectives to ensure efficient and effective departmental operations. General management advice and counsel to all levels of the organization continued to ensure compliance with audit and other central agency guidelines.

Internal Audit and Systems

The position is accountable for planning and carrying out reviews of existing and proposed financial and procedural systems of the Department and its agencies. In addition, it operates as a resource to senior management and provides advice on policy matters to ensure effective and efficient program delivery.

Activities for the year included:

- audits of several programs and making recommendations on their systems to improve the economy, efficiency and effectiveness of their operations.
- being part of a work group responsible for carrying out a Phase I review of the Manitoba Agricultural Credit Corporation. This study focused on the loan application approval process and resulted in a number of recommendations to significantly reduce the loan turnaround time of the Corporation.
- continued input into the operations of the Keystone Centre through the review of budgets and financial results. This process included offering advice on several major issues which came up during the year.
- involvement with various committees and boards to ensure adherence to central and departmental policies and to provide guidance on proposed legislative changes and new programs.
- working on new policies for revenue and accounts receivable management which would be acceptable to both central agencies and internal management of the Department.

Financial Administration

Financial Administration provided support to all divisions of the Department. Activity centered on four major areas: annual estimates, sessional notes, cash flows and supplementary estimates.

The Department's annual estimates for the 1987-88 fiscal year were compiled through close cooperation with each director and presented to the Minister and Executive for review before Cabinet presentation.

Sessional notes, describing the budget details for discussion by the Minister in the Legislature were prepared along with financial details at the appropriation level.

Continued emphasis was placed on estimating the monthly cash flow of expenditures and revenue at the program level for more effective reporting.

Revised and supplementary estimates for the 1986-87 fiscal year were compiled for unforeseen and emergency expenditures.

Financial reports, expenditure codes, unique codes and other related matters were developed.

Department of Agriculture
Expenditure Summary by Appropriations
Year Ended March 31, 1987

Appro Number	Service	Actuals \$	Estimates \$	Variance \$	Explanation No
03-1	ADMINISTRATION AND FINANCE				
03-1A	Minister's Salary	20,531	20,600	(69)	
	Executive Support				
03-1b-1	Salaries	267,694	252,400	15,294	
03-1b-2	Others	93,862	116,000	(22,138)	
03-1b-3	Policy Studies	103,917	117,900	(13,983)	
	Communications Branch				
03-1c-1	Salaries	387,053	430,300	(43,247)	
03-1c-2	Others	270,142	315,700	(45,558)	
	Finance and Administration Services				
03-1d-1	Salaries	570,472	636,700	(66,228)	
03-1d-2	Others	59,549	70,100	(10,551)	
	Computer Services				
03-1e-1	Salaries	192,663	188,500	4,163	
03-1e-2	Others	58,176	79,300	(21,124)	
	Personnel Services				
03-1f-1	Salaries	168,555	176,000	(7,445)	
03-1f-2	Others	21,164	20,300	864	
	Program Analysis				
03-1g-1	Salaries	169,073	166,800	2,273	
02-1g-2	Others	7,778	14,000	(6,222)	
	Total vote 1	2,390,629	2,604,600	(213,971)	
03-2	Manitoba Crop Insurance Corporation				
03-2a	Administration	4,322,833	4,370,900	(48,067)	
03-2b	Canada-Manitoba Waterfowl Damage Compensation Agreement	1,050,000	300,000	750,000	1
	Total vote 2	5,372,833	4,670,900	701,933	
03-3	Manitoba Agricultural Credit Corporation				
		7,542,626	14,106,800	(6,564,174)	2
03-4	Agricultural Development and Marketing Division				
	Administration				
03-4a-1	Salaries	76,559	81,900	(5,341)	
03-4a-2	Others	6,298	6,300	(2)	
	Animal Industry Branch				
03-4b-1	Salaries	1,559,581	1605,600	(46,019)	
03-4b-2	Others	657,833	654,400	3,433	
	Veterinary Services Branch				
03-4c-1	Salaries	1,362,298	1,321,300	40,998	
03-4c-2	Others	932,044	908,100	23,944	

Department of Agriculture
Expenditure Summary by Appropriations
Year Ended March 31, 1987

Appro Number	Service	Actuals \$	Estimates \$	Variance \$	Explanation No
	Soils and Crops Branch				
03-4d-1	Salaries	1,870,349	1,853,200	17,149	
03-4d-2	Others	975,733	1,056,600	(80,867)	
	Northern Development Agreement — Provincial				
03-4d-3a	Salaries	52,581	52,100	481	
03-4d-3b	Others	38,392	43,000	(4,608)	
	Technical Services and Training Branch				
03-4e-1	Salaries	1,347,886	1,313,400	34,486	
03-4e-2	Others	1,149,573	1,239,700	(90,127)	
03-4e-3	Agricultural Societies	549,852	566,200	(16,348)	
	Northern Development Agreement — Canada/Manitoba				
03-4e-4a	Salaries	68,778	96,700	(27,922)	
03-4e-4b	Others	42,400	44,100	(1,700)	
03-4e-4c	Recoverable from Northern Affairs	(111,178)	(140,800)	29,622	
	Marketing Branch				
03-4f-1	Salaries	219,477	247,800	(28,323)	
03-4f-2	Others	148,421	176,600	(28,179)	
	Total vote 4	10,946,877	11,126,200	(179,323)	
03-5	Farm and Rural Development Division				
	Administration				
03-5a-1	Salaries	63,739	81,900	(18,161)	
03-5a-2	Others	5,738	6,400	(662)	
	Northwest Region				
03-5b-1	Salaries	1,177,561	1,162,200	15,361	
03-5b-2	Others	321,348	353,300	(31,952)	
	Southwest Region				
03-5c-1	Salaries	1,480,438	1,490,800	(10,362)	
03-5c-2	Others	298,770	332,900	(34,130)	
	Central Region				
03-5d-1	Salaries	1,552,747	1,579,200	(26,453)	
03-5d-2	Others	345,139	333,800	11,339	
	Eastern Region				
03-5e-1	Salaries	975,797	962,200	13,597	
03-5e-2	Others	228,209	247,000	(18,791)	
	Interlake Region				
03-5f-1	Salaries	1,148,582	1,134,500	14,082	
03-5f-2	Others	266,247	293,500	(27,253)	
	Manitoba Water Services Board				
03-5g-1	Salaries	1,323,143	1,332,000	(8,857)	
03-5g-2	Others	431,084	459,000	(27,916)	

Department of Agriculture
Expenditure Summary by Appropriations
Year Ended March 31, 198

Appro Number	Service	Actuals \$	Estimates \$	Variance \$	Explanation No
03-5h-1	Agricultural Crown Lands Branch				
03-5h-2	Salaries	1,150,452	1,278,900	(128,448)	
	Others	781,395	820,000	(38,605)	
	Total vote 5	11,550,389	11,867,600	(317,211)	
03-6	Policy and Economics Division				
	Administration				
03-6a-1	Salaries	86,664	81,900	4,764	
03-6a-2	Others	12,583	15,700	(3,117)	
	Economics branch				
03-6b-1	Salaries	533,056	589,400	(56,344)	
03-6b-2	Others	83,817	125,500	(41,683)	
	Manitoba Natural Products Marketing Council				
03-6c-1	Salaries	137,348	146,600	(9,252)	
03-6c-2	Others	35,554	43,700	(8,146)	
03-6d	Milk Prices Review Commission	31,200	31,200	0	
	Manitoba Farm Lands Ownership Board				
03-6e-1	Salaries	117,945	131,400	(13,455)	
03-6e-2	Others	26,498	33,200	(6,702)	
03-6f	Agricultural Research Grant (University of Manitoba)	875,500	875,500	0	
	Total vote 6	1,940,165	2,074,100	(133,935)	
03-7	Federal/Provincial Agreements				
03-7a	Value Added Crops Production Agreement	0	0	0	
03-7b	Agri-Food Agreement	1,301,529	1,370,300	(68,771)	
	Total vote 7	1,301,529	1,370,300	(68,771)	
03-8	Income Insurance Fund				
03-8a	Beef Stabilization	5,719,448	6,251,400	(531,952)	
03-8b	Hog Stabilization	7,641,133	5,542,800	2,098,333	3
03-8c	Sugar Beet Assistance	784,072	812,000	(27,928)	
	Total vote 8	14,144,653	12,606,200	1,538,453	
03-9	Drugs and Semen Purchases	6,147,169	5,299,600	847,569	4
0310	Expenditures Related to Capital Assets				
0310A	Capital Grants	5,343,567	4,820,000	523,567	5
03	Total Department	66,680,437	70,546,300	(3,865,863)	

Explanatory Notes For Expenditure by Appropriation Summary

Year Ended March 31, 1987

1. Later than usual harvest of crops in 1986 due to adverse weather conditions resulted in excessive damage to crops by migratory waterfowl.
2. Special funding of \$6,500,000 was not spent due to the delay in legislative and program approvals. In addition, because of continuing poor economic conditions, some producers under the Young Farmer Rebate Program were unable to meet the terms of the agreement and were not eligible for rebates. Such conditions also contributed to higher than expected guaranteed loan loss claims and bad debt write-offs.
3. The provincial share of premiums was much higher than expected due to higher than anticipated producer participation under the new Tri-Partite Hog Plan. In addition, outstanding capital loans under the former plan were higher than expected.
4. Drug and semen purchases were higher than estimated due to the continued growth in sales.
5. Increased spending was necessitated for the department to meet its commitments under the Sewer and Water Program.

Personnel Services

Personnel Services provided advisory assistance to management and staff on the recruitment and selection of employees, wage and salary administration, employee relations, staff development and training, Affirmative Action, and Workplace Safety & Health.

A new training position was established to enhance the leadership and meet the demand of the Department's successful "Management Update" training and development program. This year, they met the needs identified in strategic planning, time management and stress management. A major classification review was undertaken in the Manitoba Agricultural Credit Corporation. In addition, wage and salary administration, training and development and employee relations services were provided to both the Manitoba Crop Insurance Corporation and the Manitoba Beef Commission.

Computer Services

Computer Services Branch is responsible for maintaining, enhancing and developing computer management systems that assist in efficient and effective operations of departmental programs.

Data processing activity increased in the areas of administration and consulting as staff became more familiar with micro computer technology. Financial planning, budgets and engineering/drafting are examples of these activities.

Many of the ongoing systems required major enhancement, including crown lands administration, agriculture credit and loans, soil test analysis and dairy herd improvement. Development continued on two systems: veterinary drug order/entry and crop insurance.

The branch also provided service to department staff for statistical analysis, graphics, procurement/installation/maintenance of hardware and software, the administration of electronic data processing funds, and the management of word processing services.

Program Analysis

The primary function of Program Analysis is to provide management support services. These services are wide-ranging but may be grouped into 4 areas: (1) assisting individual staff, branches, regions or divisions to evaluate the effectiveness of their programs; (2) cooperating with and supporting the financial administrator, directors and managers in the development of budget estimates and revenue expectations for Ministerial and Cabinet review, as well as sessional notes for House debate; (3) providing management with specific activity reviews and recommendations as well as developing internal operating processes to achieve management goals; (4) and providing

assistance to the Federal-Provincial Coordinator in the development, implementation and evaluation of programs under the Agri-Food Sub-Agreement of E.R.D.A.

During the year the branch completed an update of a summary of departmental policies and programs.

Close liaison was maintained with directors and managers in the development of program information required to support the departmental budget estimates and to provide assistance to directors in budget control.

Documents were prepared for Cabinet review which provided a departmental program and situation overview, budgetary program objectives and results. In addition, a further document was developed for M.L.A.s, known as "Supplementary Information for Legislative Review". This document was made available in time for the 1987-88 Agricultural estimates review.

The branch, with assistance of the Internal Auditor and the Manager, Computer Services, carried out a review of the M.A.C.C. direct loan process, with emphasis on turnaround time, in cooperation with M.A.C.C. staff and management. Recommendations were made to management.

An internal review of the department's revenue policy was completed. Also, reviews of the ESPO Farm operation and the crop evaluation project under Agri-Food were undertaken for management.

The branch provided leadership in the creation of program development and implementation teams that led to the preparation of upgraded departmental program strategies with respect to farm families and the farm business, beef and hog production, forage, cereals, oil-seeds and special crops production and marketing.

Leadership was provided in establishing the departmental procedures necessary for the operation of an informational retrieval process under the Freedom of Information Act.

Support to the monitoring of Agri-Food projects was continued with particular emphasis on cash flows and yearly budgetary requirements.

Agricultural Research

University of Manitoba

During the fiscal year, Manitoba Agriculture provided a grant of \$875,500 to the University of Manitoba to support the University's agricultural research program. The grant was used to provide operational support for research projects in all major disciplines. These included agricultural engineering, animal science, entomology, food science, plant science and soil

science. Funds were also used for the development and maintenance of the University's central research station at Glenlea.

Manitoba Agricultural Services Coordinating Committee (MASCC)

Staff from the Department participated in the activities of the Manitoba Agricultural Services Coordinating Committee (MASCC). MASCC is an advisory body which recommends methods to improve the quality of

agricultural services to farmers and others in the agricultural industry. The Committee is chaired by the Deputy Minister of Manitoba Agriculture. It includes representatives from the University of Manitoba. Input into the forming of recommendations is also provided by farmers and representatives from agri-business.

In 1986/87, MASCC approved recommendations on both research and non-research development. Recommendations of national significance were forwarded to the Canadian Agricultural Services Coordinating Committee (CASCC). Those primarily of provincial significance went to provincial agencies, including the Department of Agriculture, for consideration and implementation.

General Support Services

PAMI

The Prairie Agricultural Machinery Institute is a joint venture of the provinces of Manitoba, Saskatchewan and Alberta. It was established in 1974 to evaluate farm machinery and to carry out development work to improve the design of farm machinery on the prairies. The Institute has facilities at Humboldt, Saskatchewan, Lethbridge, Alberta and Portage la Prairie, Manitoba.

All test reports published by the Institute are provided to subscribers at a cost of \$10 per year or \$25 for three years. Individual test reports are available at no charge upon request from the Prairie Agricultural Machinery Institute, P.O. Box 1900, Humboldt, Sask. S0K 2A0.

The government of Manitoba made a grant of \$470,000 to PAMI for the year.

Manitoba Farm Machinery Board

The Manitoba Farm Machinery Board, together with staff, are responsible for administering the Manitoba Farm Machinery and Equipment Act, involving all areas of the farm implement industry, producers, dealers, manufacturers and distributors. The Board endeavours to provide a resource base of information and advice on problems related to the industry. In this fiscal period, the Board responded to 987 producer and 326 industry requests for assistance.

A major concern to the Board, in the present economic environment, is assisting producers to maintain their means of production by assisting when a machine goes down due to mechanical failure. Of equal importance has been negotiating numerous repayment schedules when an application for leave to repossess has been registered against a purchaser of farm machinery.

Repossession — Lenders financing farm machinery by means of a lien note submitted 149 applications for leave to repossess. Negotiation with the lenders usually produced an agreement for repayment compatible with cash flow. The Board realizes substantial contributions can be made to Manitoba agriculture by providing counselling service to producers experiencing a temporary financial shortfall.

Complaints — The Board registered 124 complaints. All complaints were investigated and properly concluded, often resulting in a negotiated settlement.

Major problem areas of farmers included: alleged failure of farm machines to perform to their intended function, the unavailability of repair parts during a critical period in the production cycle and used machinery. The Board advised producers of methods to settle disputes arising from these purchases not included under the Act.

Licenses — On March 31, 1987, 423 dealer licences and 160 vendor licences were in force. Each issued licence carries a supporting penal bond. The Board offers a bonding service through the Farm Machinery Act Fund. Under the Fund, 82 dealers and 38 vendors made use of this service.

Dealer Inspection — During this fiscal period, the Board's inspector completed 365 inspections. The annual inspection program gives the Board an opportunity to discuss areas of mutual concern with the Manitoba dealer network.

Board Activities — The Farm Machinery Board held six regular meetings during 1986/87. The Board's credit committee met six times to consider applications for bonding through the fund. Forty-two arbitration meetings were held to resolve disputes and further investigate applications for leave to repossess requiring in-depth discussion and negotiation.

Communications

The Communications Branch designed, produced and distributed a wide range of materials to the agricultural industry and the general public, in support of Manitoba Agriculture programs, policies, production and marketing.

Communication strategies continued to provide the framework for the priority program support. Responsibility for each major strategy was specifically assigned to one communication staff member.

A new approach to the branch's role in monitoring department advertising proved to be effective and efficient. In addition to regular on-going advertising, some 18 campaigns were handled by the branch.

The weekly press packet continued to be the mainstay of service to the print media, with 265 releases issued to over 800 recipients. More concentrated press coverage was arranged for activities associated with Weed Fairs, Hog Days, Forages '87, the Manitoba Beef Commission, the Manitoba Mediation Board, the Manitoba Agronomists' Conference and Agri-Food programs.

During the year nearly 300 print projects were completed with communication staff providing services ranging from writing, editing and design, to printing arrangements and distribution. A trend to fact sheet format continued and this year some publications which had traditionally been annual were planned as bi-annual projects.

During the year over 370,000 pieces of print information were distributed, in the form of publications, leaflets, brochures and fact sheets.

The department's daily radio service "Country Comment" continued to be broadcast province-wide on nine radio stations, reaching a measured daily audience averaging 30,000 adults. Several special radio services were produced, including a 16-part series on the homestudy project Forages '87.

Major television activity involved the production of a series of 24 short farm items telecast on a weekly basis during the fall and winter on television stations at Dauphin, Brandon and Portage la Prairie. In addition, the branch was involved in a number of video productions designed for closed circuit purposes. One 16mm film was completed during the year on R.O.P. in beef cattle.

In other audio visual activities associated with photography, design, graphics, video and slide sets, direct assistance was provided when possible. When necessary to involve outside producers, planning and technical coordination was provided by the branch. The distribution centre stocked 250 films and slide sets and handled 900 bookings of these materials during the year.

The Forages '87 course presented this year was the eighth homestudy course produced and coordinated by Manitoba Agriculture. A registration of 1330 indicated a successful course and the follow-up evaluation by participants showed a high degree of interest and satisfaction.

Economics

Staff of the Economics Branch compiled, analyzed and disseminated production, marketing and other statistical information for use by producers, other departmental and governmental staff, agribusiness and the public. The branch also provided resource support to department executive for use in program review, development and evaluation, plus market analysis and price forecasting.

The branch was also responsible for providing leadership and coordination of long-term policy and program developments within the Department.

Statistics

The Statistics Section's major responsibility was to acquire and provide selected data on Manitoba agriculture. This section, in cooperation with the Economic and Market Analysis Section, assists Statistics Canada in the preparation of final estimates for many of the crop and livestock statistics.

During the year, the following publications were prepared and distributed:

- 1985 Yearbook of Manitoba Agriculture
- Monthly Agricultural Condition Reports

- Weekly Crop Reports
- A Look at Manitoba Agriculture
- Farm Income Outlook
- Statistical reports on farm finances such as receipts, expenses, income, value of production, bankruptcies, land values, wages and price indices
- Statistical reports on crop and livestock production
- Reports on corn, vegetables, special crops and herbicides compiled from surveys carried out by the Section.

Economic and Market Analysis

Analysis staff were responsible for the research and provision of market information, analyses and forecasts for the major agricultural commodities and food. Supply, demand, price forecasts and impact analysis were included in the reports. Manitoba Agriculture's Outlook Conference was held in Brandon and Winnipeg during January to provide a regionalized view of future prospects for the agricultural industry.

The analysis of domestic and international markets was also disseminated to staff, farmers and agribusiness through the Manitoba Markets Weekly Report. This report provided up-to-date market information on crops and livestock, and periodic outlook reports. Staff also conducted media interviews and participated in numerous regional meetings and seminars held throughout the province.

In addition, this section also prepared an overview of primary agriculture and its impact on the provincial economy. This information was released in the new publication titled "Manitoba Agricultural Review 1985".

Policy Analysis

The Policy Section conducted research and analyzed issues, concerns, problems and trends in agriculture. It also assisted in the long-range program and policy planning of the Department. The responsibilities of the section included:

- analysis of conditions and factors affecting the agricultural and rural communities.
- evaluation of departmental programs and policies and their impact on the agricultural economy.
- participation in negotiations and discussions pertaining to interdepartmental and intergovernmental projects and agreements.

During the 1986-87 fiscal year, major emphasis was placed on:

- 1) participation in the analysis and dissemination of information related to provincial and national stabilization plans.

- 2) evaluation of alternative national quota allocation methodologies as related to supply-managed commodities.
- 3) participation in the preparation of additional material related to the United States Department of Commerce countervailing hog duty.
- 4) preparation of a Manitoba government submission to The Tariff Board regarding national sweeteners.
- 5) preparation of a paper on Canada's two-price wheat system which was presented to the Special Committee on the Pricing of Domestic Wheat.
- 6) cooperation with the Crown Lands Branch to review various land improvement studies.
- 7) participation with the Water Resources Branch (Natural Resources) to review the economic effect of selected development projects.
- 8) participation with other departmental staff in the development of commodity strategy profiles.
- 9) ongoing participation in three of the six federal/provincial working groups established by the Ministers of Agriculture. The six groups identified were agricultural development, trade policy, disaster relief, soil and water technology, research and technology transfer, and farm finance.

Manitoba Fluid Milk Commission and Manitoba Milk Prices Review Commission

The Manitoba Milk Prices Review Commission, operating under The Milk Prices Review Act, continued in 1986/87 to exercise its mandate as follows:

- setting the producer price for fluid milk (class 1 price) by monitoring and maintaining a producer cost of production formula.
- setting the minimum and maximum retail price paid by consumers for fluid milk in Manitoba (except for the far north).

The Manitoba Fluid Milk Commission, created under the Natural Products Marketing Act, also continued in 1986/87 to:

- set the minimum and maximum wholesale prices for fluid milk charged by the province's processors.
- set the wholesale prices for fluid milk paid by independent distributors/jobbers.

Effective January 5, 1987, The Milk Prices Review Commission decreased the fluid milk producer price to \$51.90/HI from \$53/HI, due primarily to falling feed prices and interest rates. This price was generated by a slightly revised cost of production formula which had been under review by the Commission since mid-1986. Formula specifications were modified to keep abreast

of current production practices and principles. At the same time, the fluid butterfat differential was increased to \$0.52 from \$0.48 per 0.1 kg of butterfat per hectolitre.

The 1¢ per litre (approx.) reduction in the producer price was passed on to the wholesale level by The Fluid Milk Commission and to consumers by The Milk Prices Review Commission. Thus Manitoba retail prices became the second lowest in Canada (behind only Alberta) across the wide range of types and container sizes of fluid milk.

During December, 1986 and continuing into January, 1987, The Milk Prices Review Commission conducted investigations into the fluid milk promotional activities of two Winnipeg retailers — one corporate chain and an independent retailer. Both matters were referred to the Attorney General for consideration of prosecution. As a result, both retailers were charged with contravention of Section 6 of The Milk Prices Review Act (selling fluid milk at less than the stipulated minimum retail price). As of March 21, 1987 both cases were still before the court.

The five member Commissions (same members serve on both Commissions) met eleven times during 1986/87. In addition, contact was maintained with officials and representatives of Manitoba Agriculture, the producer, processor and retailer components of the fluid milk industries and the Consumers' Association of Canada.

Marketing

Staff of the Marketing Branch are involved in market development and promotional activities for agricultural and food products grown and processed in Manitoba. These activities are undertaken in provincial, national and international markets.

Again this year, staff co-ordinated and hosted a number of incoming foreign missions. A total of twenty missions visited Manitoba, with eleven from Japan, three from China and one each from Algeria, Australia, Thailand, Philippines, U.S.A. and Venezuela. Food trade shows were set up to acquaint mission members with Manitoba food products for two of the visiting Japanese groups.

During the year two missions went from Manitoba, one to Japan and one to Thailand.

Throughout the year continued liaison was maintained with federal and provincial government departments also involved in marketing areas. In the area of food testing and new product development, continued association was maintained with the Canadian Food Products Development Centre at Portage la Prairie and the Food Science Department and the Nutrition Department of the University of Manitoba.

Again this year marketing staff provided assistance to marketing boards and producer groups in the development and production of numerous marketing pamphlets, brochures and, in several instances, shopping mall exhibition displays. In addition, the Manitoba Food Products Directory was updated and distributed provincially, nationally and internationally.

The department's marketing branch and the Manitoba Department of Industry, Trade and Technology jointly assisted nine Manitoba firms to participate in Food Pacific '86 during Expo 86 in Vancouver. Support to the livestock industry was provided through displays and promotions at Regina's Agribition, Brandon's Ag-Ex and the Hog Days program in Winnipeg.

Other activities of marketing staff included the coordination of the itinerary for a Japanese film crew filming the harvest and shipping of Manitoba buckwheat to Japan and, for the first time, promotion of sales of Manitoba raised pheasants to the Japanese market.

The Manitoba Water Services Board

Municipal Water and Sewage Services

The Manitoba Water Services Board is responsible for water related activities through the following programs:

1. **Municipal Water and Sewage** — The Manitoba Water Services Board provided technical and financial assistance on 49 ongoing municipal water and sewer projects during the past year. Total construction was estimated at \$9.4 M, of which \$4.6 M was in the form of grants. Sixteen projects were substantially completed during the year.
2. **Community Water Source Development** — Technical assistance was provided on 39 projects. A total of \$70,248 in rebates was paid on 21 projects by the Manitoba Water Services Board to local governments for the development of water sources from which farmers and community residents may haul or pipe water.
3. **Agricultural Community Water and Sewage** — The Manitoba Water Services Board provided technical assistance on nine community projects during the past year. Rebates totaling \$106,563 were provided to local authorities for four projects undertaken.
4. **Agricultural Area Water Pipeline** — During the past year several pipeline projects were investigated and \$238,138 of rebates paid on six systems.

On-Farm Water Services

1. **Water Source Development** — Technical assistance for farm water source development is available, as required to solve serious water problems through farm calls and detailed designs. A total of 1,688 requests for technical assistance were dealt with, while financial assistance totaling \$63,779 was provided to 59 farmers to assist in the development of satisfactory water sources in situations that did not qualify for PFRA assistance.
2. **Irrigation** — During the year, a total of \$15,481 was provided to eight farmers to assist in the development of satisfactory irrigation systems.

Dugout Filling

During 1986/87, the equipment rental charge was \$300 for filling normal-sized dugouts where the pumping distance was less than one-half mile and \$350 for filling normal-sized dugouts where the pumping distance was greater than one-half mile. A total of 62 dugouts were filled.

Agricultural Representative Service

A major mandate of the Department is to extend the latest in useful, accurate and timely agricultural information to producers. Manitoba's 40 agricultural representatives provide the vital link between researchers, specialists and farm families. They extend a wide range of information on production, management and marketing.

In recent years, agricultural representatives have played an increasing role in providing counselling on farm management, farm finances and other current areas of need. Now, trained and equipped with computers, they are able to provide this service in a more efficient and effective manner.

As the "front line" staff of Manitoba Agriculture, the agricultural representatives also play a significant role in providing feedback to the Department's administration and specialists. This information includes updates on current conditions in rural Manitoba and current needs for research, testing and other services.

While agricultural technology is a prime concern of these staff members, they are also heavily involved in rural community development through programs that include 4-H clubs, commodity groups, farm business groups and other district organizations.

During the year, Manitoba's agricultural representatives and regional specialists made over 180,000 contacts with Manitoba farmers.

Livestock Management and Marketing

The objectives of the Animal Industry Branch are to provide technical and specialist services and information to livestock producers and regional extension staff, for the purpose of enhancing the production and marketing of Manitoba's livestock, and to effectively administer the regulations under several statutes relating to livestock production and marketing.

All sections are engaged in comprehensive extension activities which include attending regional producer meetings, commodity group workshops, demonstrations and seminars as principal speakers or technical advisors, mail, telephone and on-farm consultation and the dissemination of timely technical information through news releases, newsletters, factsheets, bulletins and radio and TV presentations. Such extension activities cover all aspects of production and marketing including nutrition, housing, breeding, disease control, genetics, marketing, record keeping and husbandry and management practices.

The Branch coordinates many Provincial and Federal/Provincial livestock programs, the success of many of which relies greatly on the cooperation of regional staff.

Dairy

Farm and Plant Inspection

In their regulatory role of assuring the quality and safety of milk and milk products produced and processed in Manitoba, Animal Industry staff maintained the dairy farm, plant and milk depot inspection programs. Visits totaling 2,727 were made by farm inspectors and 652 plant and milk depot inspections were conducted.

The department is currently strengthening its quality assurance program in many phases of the industry. During the year 172 calls were made to plants regarding product quality and 1,969 tests for quality and composition of farm separated cream were made by field staff.

Bulk milk wash-up station evaluations numbered 46, and one margarine processing plant and eight margarine storage facilities were inspected. In addition, 209 inspections and/or appraisals were conducted on milk transports, milk graders and raw milk sample holding facilities.

The annual three day milk graders course and the four day milk receivers course were held in November with a total of 15 individuals in attendance. All were successful in passing the courses and licenses were issued accordingly. Refresher courses were held in Winnipeg and Brandon for all presently licensed drivers.

Dairy Laboratory

The provincial dairy laboratory routinely analyzes milk and milk products for microorganisms, antibiotics, added water and effective pasteurization. Tests in these regards totaled 144,518 in 1986/87. In addition, somatic cell counts, which indicate the likelihood and severity of mastitis in a herd, were conducted monthly on herd milk samples. Compositional analyses for producer and processor payment and milk recording purposes totaled 228,088.

The chemistry laboratory conducted additional analyses to ensure that dairy products met compositional requirements, conducted various analyses for resolving quality and other problems, and prepared standards solutions and indicators for use by industry and department staff.

Genetic Improvement

Manitoba Agriculture supports two milk recording services: the Dairy Herd Improvement Association (DHIA) and Owner/Sampler (O/S) program. The purpose of both is to improve the production performance of dairy cattle in the province. Presentations on sire selections and breeding programs were made at producer meetings and three A.I. courses sponsored by the Manitoba Semen Distribution Centre (MSDC).

The new DHIA computer program, developed in cooperation with Agriculture Canada and the provinces of Ontario, Alberta and B.C. was implemented in April 1986. During 1986, 24 new herds were enrolled on DHIA and 15 herds were discontinued for a net increase of nine herds. At year end, 291 active herds were on the program. On March 31, 1987 the waiting list for producers wishing to enroll on DHIA was 31.

Milk recording staff attended all annual meetings held by the 21 DHI Associations. A two day training workshop was held on the new computer program and four district seminars were held for the 23 DHIA supervisors in the province.

The National Identification Program (NIP), used by producers to identify grade dairy animals, was supported and promoted by the branch. Manitoba dairy producers are now benefitting from increased value of such identified cattle. There was an increase in the number of herds on the program in 1986.

Extension

All five regions carried out on-going programs with regional dairy producers. The wide range of activities included production meetings, demonstrations, barn clinics, judging schools, dairy seminars, district meetings and tours. Topics covered at these events included feeding and nutrition, feed testing, breeding,

calf rearing, herd health, milk records, quota management, butterfat depression, milking techniques, milk handling and heifer replacement. In addition, extensive one-to-one counselling was carried out on general management.

Marketing — Dairy Breeding Stock

Increasing demand for dairy cattle in international markets resulted in enquiries from Kenya, Bolivia, Saudi Arabia, Indonesia, Taiwan and Mexico. Assistance was provided to Agriculture Canada in development of a dairy seminar in Peru with the recommendation that two Manitoba producers take part in the event. Other international dairy promotion was carried out by a market development officer attending Agro Tech '87 in Thailand.

Beef

A strategy paper was developed in 1986/87 to identify areas of economic opportunities for beef production in Manitoba and to better coordinate animal industry activities and industry resources to exploit these opportunities. The strategy outlines priority areas for the department's programs and activities and is being used to coordinate the work plans of central and regional staff.

Extensive revisions were made to The Animal Husbandry Act in preparation for legislative approval in 1987. Guidelines were developed for regulations governing the bonding and licensing of auction markets and livestock dealers.

The weighing and grading of slaughter cattle in federal and domestic plants was monitored by staff and assistance given to the Manitoba Beef Commission in the on-farm determination of the readiness of cattle for slaughter. Farm visits for the latter purpose totaled 175.

The computerization of brand registration and the inventory of more than 4,000 brands commenced. One hundred and twenty-five new brands were registered.

Genetic Improvement

Technical and extension support was given to the Federal/Provincial Record of Performance (ROP) program, as well as an abridged program developed by regional and central farm management staff. The latter program was designed to provide quicker data turnaround for producers and introduce them to the ROP program.

The beef ROP awards, initiated by the branch to recognize the outstanding achievements of individual breeders, were awarded to Roger & Anne Mawer of Spring Valley Limousin Farm and Lyall Edgerton of Botany Angus Farm. A new award, National Premier

Breeder Award, sponsored by Agriculture Canada, was won by Clayton Canning of Prairielane Farms.

Genetic improvement programs initiated and conducted by the branch are the Progeny Proving Program (PPP) and the Bull Test Station Program. A total of 966 bulls were tested in seven different stations throughout the province. The PPP program continues to stimulate better record keeping and the use of artificial insemination through the offering of semen from the top gaining test station bulls and industry reference sires.

Two Agri-Food projects were coordinated by the section. The Manitoba Beef Productivity Improvement Program demonstrated the increased productivity which is possible through the use of a comprehensive breeding and nutrition program. The Genetic Improvement Evaluation Project demonstrated the increased productivity achieved through the use of genetic improvement programs.

Extension

Regions continued to report an emphasis on one-owner finishing of beef. Staff noted an increasing interest by farmers in livestock nutrition areas including balancing rations for the feedlot, wintering calves and replacement heifers, feeding vealer calves and replacement heifers, and use of problem feeds.

Demonstration programs involved a number of Agri-Food projects, including grassland programs, heifer wintering programs, feedlot finishing, cow-calf management, fly control and a spayed heifer project. All demonstrations have been successful in illustrating to district producers the economic advantage of following recommended procedures.

Other regional extension in support of the beef industry included such events as short courses, seminars, meetings, demonstrations, tours and consultations. Major topics covered were handling facilities, calf shelters, facility design, livestock records, herd health, A.I., feeding and nutrition, management for finishing, breeding and fly control.

A Women's Course in Beef Production held at Shoal Lake was the first of its kind and proved to be most successful.

Marketing — Beef Breeding Stock

Assistance and consultation was provided to private exporters and beef breeding associations on a request for service basis, to assist them in examining export procedures and preparing export quotations, particularly for S.E. Asia and Mexico. In addition, staff promoted Manitoba beef breeding stock at Agro Tech '87 in Bangkok, Thailand.

Swine

A strategy paper was developed for the Manitoba swine industry by central and regional staff. About 1,000 people attended Manitoba Hog Days in Winnipeg. This popular 2-day annual event, organized by a joint industry-MDA committee, with financial assistance from the Manitoba Hog Producers' Marketing Board, featured educational seminars and 96 commercial exhibits.

Educational efforts aimed at improving quality control procedures for producers using electric proportioner hammer mills continued, with nine presentations made on this topic to producers and feed manufacturers. Investigations regarding the amino acid content of Manitoba feed grains commonly used in swine diets were conducted to improve the precision of ration formulations.

Genetic Improvement

Manitoba Agriculture supports two swine performance testing programs: the Federal/Provincial ROP Program and the Commercial Hog Improvement Program (CHIP). The aim of both is to encourage the use of genetically superior animals through testing and culling procedures.

In 1986, 4,092 animals were home tested in the ROP program and 130 boars were evaluated at the Brandon Test Station.

Five herds, representing 507 sows, participated on the National Sow Productivity and Management Program, with average reproductive performance of 2.3 litters weaned and 19.7 pigs weaned per sow per year.

The Commercial Hog Improvement Program (CHIP) is a performance testing and record keeping program available to commercial producers. The department provides an ultrasonic backfat probe service and various record keeping materials. Producers were also provided with ear notchers, sow recording charts, pocket notebooks, and other aids to facilitate the collection of production information. Computer software for analysis of reproductive records was obtained and distributed to regional staff for demonstration purposes to producers. During the year, 18 commercial producers evaluated 537 gilts for backfat thickness and growth rate. Ongoing training and support was provided to staff and producers involved in ultrasonic evaluation of backfat thickness.

Extension

The regions reported somewhat higher interest in hog production this year, due in part to higher hog prices

and lower feed costs. As part of the same trend, staff reported an increase in enquiries on barn construction, barn renovation and barn ventilation. Other common areas of concern involved record keeping for performance, management and analysis, nutrition and feeding, reproductive performance, A.I., herd health, marketing, stabilization plans, support to the annual Hog Days program and hog farm computer programs.

Agri-Food Projects

Four Agri-Food projects related to swine production operated during the year. These projects involved the establishment of a swine artificial insemination technician service, demonstration of the benefits of a herd health program, assessment of the design and management of swine self-feeders, and an evaluation of different methods of feeding gestating sows. A number of information meetings and tours relating to these projects were held during the year.

Marketing — Swine Breeding Stock

Staff worked with the Manitoba Swine Breeders Association and federal agencies to coordinate incoming swine missions from China, Venezuela and Japan to inspect our swine breeding stock industry.

Assistance was provided to buyers and sellers in sales of Manitoba breeding stock to Japan, Thailand and Italy, and quotations were supplied on Manitoba bred stock for markets in Mexico, Philippines, Chile, Haiti, Brazil, Peru and Ecuador. International swine promotion was also carried out at an international show in Thailand.

On the provincial scene a swine promotion display was developed and staffed at the 1987 Hog Days program in Winnipeg.

Marketing — Pork

A considerable amount of new pork business was developed in Japan due, in part, to four Japanese missions visiting Canada. During a trade mission to Japan two pork seminars were conducted for retail meat managers and a successful Manitoba Pork Promotion was held in a number of Japanese retail stores. The trade mission to Japan resulted in marketing staff initiating research on fresh chilled vacuum-packed pork for export.

Within Manitoba, staff assisted the Manitoba Hog Producers' Marketing Board with shopping mall and exhibition promotions and worked through the board on the national "Put Pork On Your Fork" campaign.

Sheep

Extension activities are the main function of the animal industry staff in this section. The newsletter "Sheep Sense", which includes a market report, was published bi-monthly. In addition to regional producer meetings, on-farm demonstration projects featuring out-of-season breeding techniques were conducted. The predator taste aversion program, which aims to discourage a taste for sheep in coyotes and other predators by the use of lithium chloride baits, was continued. The branch provided the lithium chloride and assistance at bait making time. The annual sheep seminar was a successful event.

Support was given to the Federal/Provincial Sheep ROP Program.

The sheep specialist coordinated the annual wool collection and provided advice and assistance to the Man-lamb Producers' Co-op Ltd. and the Manitoba Sheep Association.

Marketing staff worked with the Manitoba Sheep Association in the development of numerous rural and urban displays and produced an association membership brochure.

Poultry

Extension activities included a distribution of a ROP book for broiler breeders and instructions on its use. Records from 26 participating producer flocks were processed and summarized.

Breeding

The hatchery monitoring project, in which the effectiveness of the sanitary procedures of both hatcheries and their supply flocks is assessed, was continued. In addition, a self-monitoring program, utilizing supplies provided by the department, was conducted by five hatcheries.

Owners of turkey breeding flocks took advantage of the opportunity to have their turkey toms graded through the collection and examination of semen by branch staff. This process allows the selection of toms with the greatest fertilizing capacity and the culling of those of poor breeding quality. Management suggestions accompanied participation in this activity.

Regulatory

Application of the regulations under The Livestock and Livestock Products Act involved pullorum-typhoid testing of all hatchery supply flocks and the inspection of premises.

In addition to the pullorum test, turkeys were tested by blood samples for salmonella typhimurium, Mycoplasma's gallisepticum, synoviae, and meleagridis. Samples of blood were taken from all chicken breeder flocks and tested for Mycoplasma gallisepticum, Mycoplasma synoviae and infectious bursal disease. All turkey breeder flocks were tested periodically to maintain a Mycoplasma meleagridis-free status.

Manitoba poultry health committee funded purchase of E.L.I.S.A. equipment for the Veterinary Diagnostic Laboratory to monitor poultry bloods for antibody levels to various infectious diseases.

The department continued to administer regulations respecting poultry and poultry products under The Livestock and Livestock Products Act. These regulations require the licensing of poultry dealers. In this regard, 28 licences and 6 branch licences were processed. Nineteen hatcheries were also licensed.

Marketing — Poultry

During a trade mission to Japan a Manitoba turkey promotion was held in a number of Japanese retail stores. Many of the Japanese missions to Manitoba included current or potential customers for Manitoba poultry. Increased international markets resulted from the significant expansion of deboning facilities in the province, designed to meet requirements of overseas buyers.

Provincially, assistance was provided to the poultry marketing boards on shopping centres and fair displays and recipe pamphlets were prepared and distributed.

Feed Testing Laboratory

The laboratory analyzes feed samples submitted by livestock producers, feed companies, department staff and others. Chemical analyses are forwarded to nutritionists for interpretation and comment. For the year, the laboratory analyzed 707 samples of grain, 4,606 forage samples, 871 complete feeds and 240 unclassified samples, for a total of 6,424 samples. Staff performed 29,525 analyses on these samples.

Animal Nutritional Services

These services ensure that producers and owners of all species of animals have the most up-to-date technical information on nutrition and nutritional practices. Detailed, yet readily understandable feeding recommendations are provided in response to results of feed analysis.

For the year, 2,285 written reports were issued as a result of 5,684 individual feed samples submitted. This

includes over 900 reports to the Manitoba Crop Insurance Corporation's Livestock Feed Security Program, based on over 2,200 samples submitted. In addition, approximately 650 reports were prepared in response to samples submitted by other segments of the industry, including local veterinarians and feed companies.

As well as written recommendations based on feed analysis, nutritional counselling was provided in several hundred cases, both verbally and via mail, to producers and agri-business.

Nutritional expertise was provided to the beef and swine sections through the joint 'Manitoba Bull Test Station Feed Evaluation Project' and 'Swine Feed Mill Calibration Project', and to the forage section of Soils and Crops by contributing to the Forages '87 Homestudy Course.

Engineering Services — Livestock

Technical assistance was provided to livestock producers on many topics including planning, development and remodeling of livestock facilities, farmstead and building layouts, structural design and construction, equipment design and selection, ventilation system design and installation, facility operation and management, problem solving and trouble shooting. Engineering service was provided to 2,620 individuals, including 500 on-site farm calls related to livestock facilities. Engineering information was extended to over 1100 producers through 36 public presentations.

Over 2000 standard building plans were supplied through the building plan service and an additional 300 plans were developed or modified for specific producer needs. Ventilation technology continued to be emphasized through the whole livestock industry. Four years of development and evaluation on ventilation systems by department engineers resulted in many livestock facilities in the province now using the results.

Other activities included major studies or demonstrations in the areas of performance of self-feeders for swine, on-farm feed preparation, farm pasture fencing, calf range shelters, hay drying in storage and a continuation of the ventilation development activity. In addition to producer contact, engineers also provided an indirect support to the livestock industry through 820 contacts with agri-business, livestock service suppliers, contractors, and equipment manufacturers and suppliers.

Veterinary Services

The Veterinary Services Branch develops and administers the programs and activities which are proven necessary to assure rural and urban Manitobans ready access to competent veterinary services. Adequate veterinary care for the livestock industry is considered an important factor in the overall Canadian economy.

Western College of Veterinary Medicine

Manitoba shared in the operating cost and the student quota of the Western College as an ongoing partner with Alberta, British Columbia and Saskatchewan. The competition for the 72 student positions and the slightly fewer graduates remained high. Manitoba managed to meet their needs for graduates, although the quota of 12 students has barely sufficed over the past years.

Veterinary Science Scholarship Fund Act

This activity was introduced in 1946 to counteract a declining interest in veterinary medicine, to assist Manitoba students in their four year away from home study and to encourage their return to rural Manitoba practice. For each year of Manitoba service one-fifth of their total scholarship is written off. Scholarships of up to \$750 per year per student are available. Currently about 25 students out of a total Manitoba enrollment of 48 are assisted from this fund.

Veterinary Student Summer Employment

Manitoba students must go out of province for the latter four of their six year university course. This four year separation tends to break their home ties with Manitoba unless they are brought back for their summer recess each year.

The veterinary student summer employment activity attempts to maintain their home preferences, intersperse each of their academic years with three months of practical training appropriate for their academic level and favourably impress them with the satisfactions to be gained from rural Manitoba service. Twenty-six students were employed in 1986.

Veterinary Services Act

This Act provides for a group of municipalities sharing a common need for resident veterinary services to form a Veterinary Services District to support such services through the maintenance and operation of a district animal hospital.

Thirty-one districts have been established, 30 hospitals constructed and 55 veterinarians have been recruited to serve under the program. The annual cost to maintain and operate the districts is shared equally between the municipalities and the province and totalled \$749,300 in 1986.

This activity resulted in the 55 veterinarians making 34,289 farm calls, attending to 46,572 hospital cases and responding to 92,541 requests for professional advice. These services involved over 629,146 animals worth some \$208 million. By realistic estimate given the success rate usually attained, the service saved in the order of \$56 million in livestock productivity during the year.

Veterinary Drug Distribution Centre

The Veterinary Drug Distribution Centre was established in 1974 to provide veterinarians with the volume buying power which would allow them to compete in the market place to regain the drug business and thereby stabilize their services to farmers.

Over the 13 intervening years this volume buying power coupled with the mark-up restraint in return for hospital privileges, has more than tripled the veterinary share of the market and the percentage of drugs which are administered under professional advice. This development has made the drug activity the most significant factor in stabilizing rural veterinary services.

At the same time the activity directly benefited the farmers in reduced drug costs, in less losses due to drug misuse, in less need to supplement veterinary income and in greater use of veterinary services. The total identifiable benefit approximates \$6.6 million for the year.

Manitoba Semen Distribution Centre

The Manitoba Semen Distribution Centre makes available high quality semen from genetically proven bulls, wherever located, without the cost of owning, proving and keeping them. In 1986/87 the centre experienced phenomenal growth to over \$1 million in purchases. The A.I. centre provides a regular truck distribution of semen from 14 studs across Canada and the U.S. to all technicians and private breeders throughout the province.

Humane Treatment of Animals

The Animal Diseases Act now states that livestock deprived of normal feed and care are classed as "diseased" and thereby subject to the veterinary directions authorized under that Act. Over 90 per cent of rural veterinarians have volunteered to act on demand as humane inspectors.

A highly cooperative working arrangement has been developed with the R.C.M.P. Over 50 cases were handled this year with about half proving unfounded. Many respond well to veterinary direction and only a few require court action.

Field Services

Field activities dealt primarily with overseeing the expenditure of grant monies in the 30 Veterinary Services Districts, in conducting field investigations of difficult and obscure cases presented to the laboratory, in coordinating the humane inspections carried out in rural Manitoba, in acting as veterinary consultant to the Drug and Semen Centres and in extending veterinary information to farmers. This position worked closely with practicing veterinarians, with local district boards, with the laboratory staff and with agriculture representatives and livestock specialists.

Veterinary Laboratory Services

The Veterinary Laboratory is the only full scale diagnostic laboratory serving the livestock industry in the province. It provided prompt and thorough identification of pathogens from outbreaks of disease in herds or flocks. This information was used by veterinary practitioners to treat the herd at risk, thereby preventing further losses. The swift remedial action afforded by the information from the lab assisted in preventing the spread of disease to adjacent farms.

The veterinary laboratory is a reference centre for veterinarians, livestock owners and others who require counsel in subjects of animal health and welfare. It is the first line of defence against exotic diseases which chance to invade provincial herds or flocks.

The mammalian pathology and avian medicine section is the receiving area for carcasses and tissues from herds or flocks suffering disease outbreaks. The cause of a disease outbreak may be identified at this point, permitting prompt remedial action in the herd or flock of origin. In many cases, the specimens are distributed to the other laboratory sections for further tests to identify the pathogens contained therein. Veterinarians and livestock owners are often in close contact with laboratory staff in this section, in their quest for disease diagnosis and treatment advice.

The infectious disease section deals with the isolation and identification of a wide variety of animal pathogens of viral, bacterial, fungal and parasitic nature. Positive identification of the pathogen permits the adoption of appropriate treatment and preventative measures. This section liaises with public health authorities and with federal laboratories in cases beyond our internal capability. This section also conducted thousands of serological procedures on serum samples from birds

that are to be exported to the U.S. ELISA equipment is a most welcome recent acquisition which will aid greatly in implementing preventative and diagnostic medicine in large poultry flocks and animal herds. The donation of this instrument by the poultry industry is gratefully acknowledged.

The clinical pathology and toxicology laboratory deals primarily in the determination of blood chemistry and cell abnormalities which are diagnostically significant of specific disease conditions. This data is most frequently requested in sick animals under treatment but where the diagnosis is still obscure.

The histology section prepares tissues for microscopic examination in support of the mammalian and avian pathologists.

The toxicology and micronutrient laboratory experienced a marked increase in submissions due to demonstrated ability to decrease turnaround time from weeks to 24 hours and at the same time decrease the cost to the producers.

Bees and Honey

In 1986 some 109,664 bee colonies were producing honey in the province. These originated from imported packages (54,873), from wintered colonies (54,421) and from nuclear colonies produced from winter stock (370).

Staff extension activities centered on newsletters, meetings, personal visits and support to the four regional beekeeper associations. Assistance was provided to the Red River Apiarists' Association in organizing the Manitoba National Honey Show and in providing displays at regional fairs and exhibitions. Close liaison was also maintained with the Department of Entomology, University of Manitoba, particularly with regard to night school classes.

Support to the beekeeping industry at a national level was continued through support to the Canadian Association of Professional Apiculturalists and the Canadian Honey Council.

For the first time the Manitoba Crop Insurance Corporation offered crop insurance on the honey crop in 1986. Thirty-six beekeepers insured over 14,000 colonies, paying premiums of \$37,337 and receiving payouts totaling \$98,060.

Marketing staff were successful in finalizing significant sales of Manitoba honey to Europe. Provincially, promotional activity involved several major events and the printing of recipe pamphlets.

Apiary Inspection

A total of 15,636 colonies were inspected during the summer of 1986, for American foulbrood and European foulbrood. Of the 506 beekeepers whose operations were inspected, 8.9 per cent were found to have equipment with American foulbrood present, compared to 1.0 per cent a year earlier.

Bee Mite Survey

Additional staff were hired to conduct a survey of established colonies and imported package bees for the presence of the honey bee tracheal mite. A total of 667 one hundred bee samples were collected and analyzed. As a result of this sampling, bees infested with tracheal mite were found in a shipment from South Carolina, but by the time the infestation was identified the bees had been distributed to seven beekeepers. All sites involved were quarantined. Following the honey flow all affected colonies were depopulated.

Agri-Food Research

Staff were involved in the continuation of an Agri-Food project started in 1985 sponsored by the Manitoba Beekeepers' Association. The purpose of the project was to study the effects of various pallet arrangements of hives on bee drift and to determine the honey production potential of various nectar producing crops. Assistance was also provided to another Agri-Food research project involving the study of chalkbrood disease in leafcutter bees.

Bear Damage to Apiaries

Under the bear fence grant program, administered by the Department of Natural Resources, beekeepers are eligible for a \$100 grant for each electrified fence erected around an apiary. Each beekeeper is eligible to claim for a maximum of 10 fences per year. During 1986/87, a total of 33 grants were paid.

The Department of Natural Resources also offers a bear damage compensation program to compensate beekeepers for hive equipment losses caused by bears. In 1986/87, beekeepers were paid a total of \$19,000 under this program.

Alfalfa Leafcutter Bees

Alfalfa leafcutter bees are managed to pollinate alfalfa for seed production. The department's apiarist staff provided ongoing support to this facet of the industry, primarily through support to the Manitoba Alfalfa Seed Producers' Association (MASPA). Newsletters and personal visits were used extensively to provide required technical advice.

A producer survey carried out by MASP A indicated that chalkbrood disease remains limited to the Interlake region, with five cases showing up in 1986 compared to two the previous year. The five cases of this disease were detected by the survey involving 140 leafcutter bee operations. As part of a three-year Agri-Food project, MASP A further developed demonstrations on practical methods for prevention and control of chalkbrood disease in leafcutter bee operations.

During 1986 MASP A constructed four dipping tanks designed to sterilize nesting material and made them available to cooperators. A total of 5,737 nests were sterilized this way using these tanks. A mobile mechanized dipping system was later constructed by MASP A for use and evaluation in 1987.

Crop Management And Marketing

Field Crops

The development of a crop strategy was a major undertaking in the 1986-87 fiscal year. The main objective of the strategy was to maintain and improve the economic and social returns to the family farm and the agricultural community from the production, marketing and processing of cereals, oilseeds and special crops. The strategy also takes into account the current difficult economic conditions in the industry and includes plans for improved extension programs.

Corn and Sunflower Testing

The Manitoba corn committee and Manitoba sunflower committee annually co-ordinate the testing of corn and sunflowers in Manitoba. In 1986, corn trials were conducted at three locations, and sunflower trials at five locations, in co-operation with two Agriculture Canada research stations and the University of Manitoba. The performance data generated was used for the registration of new hybrids in Canada, as well as the recommendation of hybrids for Manitoba. The combined 1985 and 1986 performance data was used for registration support of 10 grain corn and one silage corn hybrid, as well as seven oilseed sunflower and two non-oilseed sunflower hybrids.

New Crop Investigation and Development

The search for new crops which have feasibility for production in Manitoba continued in 1986.

The crops investigated for timely seeding included safflower, sprouting radish (Kaiware radish) and yellow mustard. The first week of May was identified as the optimum time for planting of safflower, and the second week of May most favourable for sprouting radish and yellow mustard.

The investigation of fertility needs for safflower were found to be very comparable to fertility recommendations for sunflowers in Manitoba.

Seed multiplication of the small seeded soybean variety OT-82-1 was undertaken in conjunction with the Manitoba Pulse Growers Association, at five locations of 0.8 hectare (2 acre) size. The increase was successful at four locations planted on a timely basis, but frost damaged a later planted plot. Composite samples supplied to "natto" manufacturers in Japan, showed good satisfaction with seed size, but concern over a high percentage of hard seed. Further improvements in the quality of OT-82-1 will be necessary.

Herbicide investigations in safflower, soybeans, lathyrus and lupins were conducted in conjunction with the Weeds Section, the University of Manitoba, and Agriculture Canada.

Seed Production

A total of 1,229 Manitoba seed growers devoted 114,295 hectares (282,311 acres) to seed production in 1986. This represented an increase of 3,316 hectares (8,191 acres) from 1985.

Table I
Major Crops Planted For Seed Production — 1986

	Hectares	Acres
Wheat	44,583	110,120
Oats	2,174	5,370
Barley	19,857	49,048
Flax	15,623	38,589
Canola	2,769	6,840
Other	29,289	72,344
Total	114,295	282,311

Variety Evaluation — Agri-Food

The variety evaluation project funded under the cost shared agreement between Agriculture Canada and Manitoba Agriculture was conducted for the eighth consecutive year. The evaluation determined the performance of 19 crops, including 87 varieties of cereal, oilseed and special crops, a large number of forage entries, cultivars of six vegetables and numerous test lines of potatoes. The trial locations for the major crops were distributed through all five regions of the province.

The information from this program is broadly used in making annual variety recommendations for the province.

Pulse Crop Demonstrations — Agri-Food

Pulse crop demonstrations were established at seven on-farm sites in co-operation with the Manitoba Pulse Growers Association. Six of these demonstrated the new semi-leaffless field pea variety Tipu. The seventh demonstrated a number of new field bean varieties or lines with potential for production in Manitoba. Field days were organized at each site.

Publications

To provide Manitoba farmers with the latest information on crop production, six publications relating to specific crops produced in Manitoba were updated and reprinted. In addition, a new pulse crop promotion bulletin was prepared in conjunction with the Department of External Affairs in Ottawa.

Due to the growing concern in regard to soil deterioration, new soil conservation recommendations were added to bulletins dealing with low crop residue crops such as field peas and lentils.

In addition staff participated in the preparation and distribution of an "Optimum Crop Management" manual. The reference publication was distributed to extension personnel of Manitoba Agriculture and made available to research staff of the University of Manitoba and Agriculture Canada.

Extension and Promotion

As part of the technology transfer to the farming public, Crops section staff participate in the presentation of crop production information at regional extension meetings. During the 1986-87 fiscal year, staff gave presentations at 28 regional meetings.

In conjunction with the promotion of good farming practices, staff encourage farmers to use high quality pedigreed seed. According to information supplied by the Manitoba Crop Insurance Corporation, the use of pedigreed seed of wheat, barley and canola in Manitoba has increased annually in a range from 3.0

to 3.6 per cent since 1981. In that period the pedigreed flax-seed increase varied from five per cent to zero per cent annually.

The adoption of new improved crop varieties by Manitoba farmers is actively promoted. The most popular varieties of the major field crops, in terms of 1986 plantings, first appeared on the recommended list four to six years earlier.

Marketing — Special Crops

Requests for market information came from such international areas as Europe, South America and the Pacific Rim countries, requesting information on Manitoba's field beans, field peas, lentils, buckwheat, canola and corn. Staff continued to work on market development with the Canola Council of Canada, the Manitoba Pulse Growers Association and representatives of industry, producer associations and individual growers.

Once again representatives of the Japanese Buckwheat Millers Association visited Manitoba to obtain firsthand information on the 1986 buckwheat crop and to discuss continuing trade in this community.

Table 2
Summary — Cereal, Oilseed and Major Special Crops — 1986

Crop	Hectares	Yield per Hectare	Price	Value of Production
Wheat	2,004,000	2.24 t/ha	\$138.85/t	\$621,205,000
Barley	627,500	2.95 t/ha	\$ 93.21/t	\$172,428,000
Oats	182,000	2.54 t/ha	\$ 84.92/t	\$ 39,320,000
Flax	417,000	1.37 t/ha	\$213.32/t	\$121,700,000
Canola	405,000	1.43 t/ha	\$229.22/t	\$132,752,000
Sunflowers	23,100	1430 kg/ha	22¢/kg	\$ 7,302,000
Field Peas	58,700	1.76 t/ha	\$197.99/t	\$ 20,477,000
Mustard	14,200	1210 kg/ha	28.6¢/kg	\$ 4,941,000
Lentils	17,800	1170 kg/ha	44¢/kg	\$ 9,205,000
Canaryseed	23,200	1230 kg/ha	22¢/kg	\$ 6,303,000

Crop	Acres	Yield per Acre	Price	Value of Production
Wheat	4,950,000	33.2 bu	\$3.78/bu	\$621,205,000
Barley	1,550,000	54.8 bu	\$2.03/bu	\$172,428,000
Oats	450,000	66.7 bu	\$1.31/bu	\$ 39,320,000
Flax	1,030,000	21.8 bu	\$5.42/bu	\$121,700,000
Canola	1,000,000	25.5 bu	\$5.20/bu	\$132,600,000
Sunflowers	57,000	1281 lb	10¢/lb	\$ 7,302,000
Field Peas	145,000	26.2 bu	\$5.39/bu	\$ 20,277,000
Mustard	35,000	1086 lb	13¢/lb	\$ 4,941,000
Lentils	44,000	1046 lb	20¢/lb	\$ 9,205,000
Canaryseed	57,300	1100 lb	10¢/lb	\$ 6,303,000

Assistance was provided to growers in developing new markets for sunflowers and canaryseed. Support was also provided to the Pulse Growers Association in presenting a promotional display, recipe pamphlets and shopping mall displays. Also, a survey assessing pulse usage in institutions was implemented and monitored.

Work was nearing completion on an oilseeds and special crops and forages seed kit that will be widely distributed through commercial concerns and Canadian embassies around the world.

Forage and Pasture Management

The Grassland Section co-ordinates and develops regional forage programs to meet the needs of Manitoba's livestock producers. A major part of this program has been the establishment of grassland societies and regional pasture projects.

Farmer participants are directly involved in the operation of these projects and they supply the cattle for the trials. Regional staff administer the projects and the department pays the operating costs. The program is most beneficial in demonstrating the benefits of good forage management involving grass, legumes and annual crops.

A forage strategy was developed to enhance the economic opportunities for farmers by improving Manitoba's forage industry. The strategy provides a background to the forage industry in the province, presents relevant objectives, and outlines an implementation process which focuses on marketing, research needs, technology transfer and resource conservation. The strategy will provide direction for all ongoing and new forage initiatives in the Province.

Agri-Food Forage Projects

There are 11 projects designed to improve production, handling, and use of forages through forage/livestock demonstrations. These include economical methods of on-farm storage, processing and feeding of forages and recommended practices to improve the use and management of pastures. Over 140 demonstrations were conducted throughout Manitoba, with very good acceptance of the projects by farmers and staff.

Tame Hay Production

Due to the large crop, the average price for tame hay decreased to a range of \$42.00 to \$47.00 per tonne (\$38.00 to \$43.00 per ton).

The department continued to promote tame hay as a base winter feed supply. The area planted to tame hay increased in 1986 by 31,000 hectares (100,000 acres). Total production was 3,085,000 tonnes (3,400,000 tons), 42 per cent higher than 1985 due to the highest reported yield in the last 50 years.

Marketing assistance was provided to a number of interested exporters of forage through provision of information on freight arrangements, documentation, product testing and listing potential buyers for trial shipments into offshore markets.

Forage Seed Production

The total farm value of forage seed production in Manitoba was about \$8.2 million in 1986.

There was about a 10 per cent increase in the total area harvested in 1986 and this, coupled with improved growing conditions, resulted in increased production. In particular, production of Kentucky bluegrass dou-

Table 3
1986 Production and Farm Gate Prices

	Production		Price Per		Farm Value
	kilograms '000	pounds '000	kilograms \$	pounds \$	
Alfalfa	950	2094	2.65	1.20	2,517,000
Birdsfoot Trefoil	200	440	3.20	1.45	640,000
Bromegrass	40	88	2.20	1.00	88,000
Kentucky Bluegrass	100	220	2.20	1.00	220,000
Meadow Fescue	90	198	.88	.40	79,000
Single Cut Red Clover	250	551	1.54	.70	385,000
Sweet Clover	1500	3307	.62	.28	930,000
Timothy	3500	7716	.95	.43	3,325,000
	6630	14614			8,184,000

bled and timothy increased by 28 per cent. In total, the 1986 forage seed crop increased by 20 per cent, while the total farm value increased 33 per cent over the 1985 crop.

On the basis of strong export demand, the prices paid for most of the crops advanced. Significant increases in price were experienced for brome grass, single cut red clover and sweet clover.

Canadian Forage Seed Project

The Canadian Forage Seed Project was established to multiply and distribute foundation seed of the older Canadian public varieties. Applications for foundation forage seed were up substantially this year in response to a strong forage seed market. In total, 149 orders from Manitoba farmers were filled, involving 8,175 kg (18,022 lb.) of foundation seed, which was more than double the volume of the previous year.

Horticulture

A wide range of extension activities was undertaken involving grower production associations, horticulture societies, mass media and section sponsored activities. Subject areas covered included commercial crops, homeowner interests and northern development. These activities accounted for 162 meetings with 9017 contacts.

The horticulture inquiries line was maintained and received 2400 telephone inquiries from May to August. In addition, for the two months before and after this period 60 to 70 calls per week were serviced. These calls were 70 per cent urban, 30 per cent rural in origin.

Rural hort lines were organized in Neepawa, Minnedosa, Boissevain and Deloraine through Horticulture Societies.

Information Development and Extension

Participation of specialists in the development of cultural and chemical pest control and general management recommendations continued in the preparation of crop and homeowner booklets, fact sheets, and bulletins. These included the general crop and vegetable crop production guides. Statistical and crop condition reports were provided as required to the Department, institutions and individuals. Pick-your-own brochures were developed in co-operation with the strawberry, raspberry and vegetable industries and marketing staff. To support the ag. rep. service, poster sets on ornamental plants, slide sets on lawn care and pruning and a publication on woody ornamentals were made available. These activities included 22 meetings with 290 contacts.

Investigation and Development

During this year, 20 northern communities participated in garden demonstrations, youth gardens, protective crop (tunnel) production and/or commercial production projects. There were 13 commercial vegetable crop projects operated by the section or by the section in conjunction with other sections, branches or institutions. In potatoes, 14 projects were set out through the Agri-Food Project contracted with the Keystone Vegetable Association Inc.

A program to reduce potato bruising involved nine production units and adjustments to 20 harvesting machines. This resulted in the formulation and publication of equipment adjustment guidelines.

With commercial fruit producers, trials on processing, variety selection, protection from winter injury, fumigation and fruit utilization were carried out.

In plant pathology, fungicide treatments were coordinated on 36 fields planted to winter wheat, barley and lentils. Results of the various activities were recorded and presented to interested groups.

New Product and Crop Development

Development work with positive progress continued on day neutral strawberries, raspberries, garlic and sweet corn for processing. Work was also continued with witloof chicory, and Jerusalem artichokes. There were 12 meetings with 45 contacts in new crop development work.

Marketing — Horticulture

Marketing staff continued to work in close association with the Manitoba Vegetable Producers' Marketing Board and the retail and wholesale industry in the development and maintenance of market share. Involvement with the Fresh For Flavour Foundation, the promotional arm of the Canadian Horticultural Council, continued with staff representation on the Manitoba Board.

A study was carried out to provide an insight into methods and criteria used by this industry in obtaining vegetable supplies. The results provided a measure of the potential for Manitoba producers to supply the requirements.

Other promotional work was carried out with the Fresh For Flavour Foundation and the Manitoba Vegetable Producers' Association. Projects included shopping mall and exhibition displays, recipe booklets and vegetable availability charts.

Staff assisted strawberry and raspberry growers by providing U-Pick maps and informational brochures. Informational brochures and planting tip sheets were also provided to the greenhouse and landscape segments of the industry.

Service Activity

The plant pathology laboratory analyzed 3,480 samples for diseases related to crops, ornamentals and animal feeds. In addition, 5,555 samples from elm trees were checked for the presence of Dutch elm disease. Surveys were conducted for blackleg in canola, cyst nematodes in sugar beet soil, mycotoxins in barley and vomitoxin in wheat.

Production of disease free seed potato stocks continued through the Agri-Food contractual arrangements with the Seed Potato Growers Association of Manitoba and production was sufficient to meet commitments to the producers.

Staff participated in presenting material and organizing training courses related to licensing programs for tree pruners and dealer applicators. Over 250 tree pruner licences were renewed and 44 new licences issued. Inspection of 27 commercial nurseries and garden centres was completed.

Through the Horticultural Societies Act, \$19,000 was paid out in membership and show grants for 43 societies and 130 judges were assigned and contacted. Staff continued to work with the Manitoba Horticultural Society, the provincial home grounds competition, the Weir Memorial Library and the International Peace Garden board.

Interagency Liaison and Research Priorization

Staff was involved with a wide range of agencies and institutions, both public and private, to assure the co-ordinated activities for the horticulture industry. These activities involved national and provincial concerns, such as free trade, grade regulations for vegetables, pesticide registration for minor use crops, research project identification and prioritization, grower/industry relationships and work with producer associations. These activities involved 205 meetings with 2360 contacts.

Engineering Services — Crops

Weed Control — A program of testing the effectiveness of sprayer nozzles continued with the results provided to staff, industry and farmers. Numerous enquiries on the selection and operation of sprayers were handled, field investigations were made on new sprayers, sprayer clinics were held throughout the province and design assistance was provided to local sprayer manufacturers.

Equipment displays were organized for the 1987 Weed Fairs in Brandon and Winnipeg. Over 100 commercial pesticide applicators were trained and tested at three applicator courses.

Grain Drying — A microcomputer program to provide design and management assistance for unheated air drying systems was completed and field tested. A program on costs of heated air drying was also developed. Two special meetings on grain drying, held for dealers who sell drying equipment, were attended by 65 people. Several hundred enquiries on drying were answered and 14 public meetings on grain drying were held throughout the province. Field tests were completed on 23 grain bins to determine air flow patterns on bins with perforated floors. In addition, two publications on grain aeration and fan tests results were updated and reprinted.

Horticulture — Some 590 consultation and contacts with producers, industry, research and other extension staff resulted in engineering assistance being provided on building plan selection, analysis and specifications of construction details and specific problem situations. Detailed design assistance was provided for 37 special crops structures, covering areas of structural design, refrigeration, heating, ventilation and humidification. A study on the performance of vegetable storage ventilation ducts was also completed.

An innovative method of insulating and constructing wood frame vegetable storage was developed, resulting in lower construction costs and elimination of major decay problems. Potato harvesting operations were surveyed to further study the problem of bruise damage during harvest and resulting recommendations were passed on to local producers.

Other — Three public meetings on machinery management and fuel saving were held, along with four combine clinics for farmers. Monitoring of diesel fuel storage tanks continued, primarily in the southwest region, to determine the existence of any contamination problems. A new guide for rental and custom rate charges for farm machinery was produced and the machinery section of the Forages '87 homestudy course was prepared by engineering staff.

A farm traction survey was undertaken to determine what problems farmers may experience in this area and the results were supplied to staff and incorporated in extension materials.

Consultations were held with numerous manufacturers, suppliers and farmers on a wide variety of field machinery topics. Assistance and advice was provided to PAMI, the University of Manitoba and other agencies, in selecting research projects.

Weed Control

Weed section staff responded to more than 1,600 enquiries from farmers, chemical dealers and consumers. Staff also participated in 31 extension meetings attended by more than 2,400 farmers. Extension efforts focused on strategies for reducing weed control costs. The use of economic thresholds for decision making was promoted and a computer program was developed to assist farmers in applying this information to their specific situations. Sixteen press releases, eight newspaper articles and 19 radio and TV interviews support these extension efforts.

Weed identification (123 samples) and crop injury assessment (147 samples) services were provided.

The work of the weeds specialists was supplemented and supported by an active and on-going weed control program in every agricultural representative's district in the province.

Weed Fairs

Two-day Weed Fairs at the Brandon Keystone Centre and the Winnipeg Convention Centre attracted a total attendance of 4,200. Approximately 110 exhibitors provided information on control of weeds and other pests, crop production and fertilizer use. Program sessions focused on methods for reducing crop production costs.

Pesticide and Fertilizer Control Act

Staff responded to 10 herbicide drift complaints concerning licensed pesticide applicators. Five aerial applicators were monitored in conjunction with Agriculture Canada. Twelve pesticide dealer and applicator training sessions emphasized the proper calibration of spray equipment, record keeping, herbicide selection and application methods.

Staff participated in the development of a self-insurance program for aerial applicators, supported by a group policy from the Manitoba Public Insurance Corporation. This arrangement achieved significant reductions in insurance costs for aerial applicators.

Weed Control Districts

Thirty-three weed boards operated in 1986. Weed supervisors enforced the Noxious Weeds Act, supervised municipal weed control programs, and assisted farmers and homeowners by providing weed control information. They made 3,496 farm visits, identified 3,000 samples, calibrated 184 sprayers and responded to more than 26,000 enquiries. Total weed district expenditures of \$1,564,572 were supported by weed district grants totalling \$336,329.

Weed districts conducted an active pesticide container disposal program. Approximately 312,000 containers were delivered to collection sites. Pesticide residues collected from the containers were disposed of by the Department of Environment, Workplace Safety and Health.

Weed Survey

A weed survey of cereal and oilseed crops was conducted in 1986. Over 500 fields were surveyed. While green foxtail and wild oats continue to be the most widely distributed weeds in the province, their abundance has declined over the past five years. An increase in weed problems such as hemp nettle, chickweed, dog mustard and red root pigweed was recorded.

Biological Control

A significant advance in the biological control of leafy spurge was achieved with the successful overwintering of a root feeding flea beetle. The insect population provided good suppression of spurge at the release site. Insects were moved to six new sites in order to establish additional populations in a number of weed districts.

Soil and Water Management

Manitoba Provincial Soil Testing Laboratory

Approximately 24,100 samples (23,000 soil; 1,100 plant) were analyzed. This represents an 11 per cent increase in total volume over 1985-86. The number of farm samples was down 14 per cent and the number of research samples was up 17 per cent from the previous year. Total revenue was \$132,000.

Analysis of farm samples resulted in an average fertilizer recommendation of approximately 100 kg N/ha. If standard fertilizer recommendations had been followed without a soil test, fertilizer use would have varied between 60 and 100 kg N/ha.

Soil Fertility

Sixteen demonstration/investigation fertility plots were established throughout the province, focusing on fertilizer placement and micro-nutrient problems. A map showing the status of copper and zinc in Manitoba soils was prepared. Results indicate that farmers are more likely to encounter micro-nutrient fertility problems on peat soils than on mineral soils.

Soil Management

Nine tillage investigation/demonstration plots were established in conjunction with Agri-Food associations. These plots focus on crop residue management for erosion control by evaluating zero, conventional and conservation tillage and various seed equipment.

A crop residue survey involving some 200 farmers was concluded on three areas in the province. This trial survey gave an indication of the value of this information for developing and targeting erosion control programs. This type of data collection will be continued.

It has been observed that there has been a marked decrease in fall tillage although canola and flax fields are still being overtilled.

Drainage-Irrigation-Climate

Fifty-seven on-farm drainage surveys were conducted and ditch designs prepared for each project. Revenue from this service amounted to \$1,980.

Ten irrigation applications were processed. Revenue from this service amounted to \$1,000. Some \$15,480 was paid to startup irrigation farmers under the irrigation rebate program. Total irrigation area equals 10,800 hectares (27,000 acres).

In co-operation with Atmospheric Environment Services, Agriculture Canada, a computer model is being developed to evaluate the efficiency of soil moisture utilization. A biological/climatological model is being developed to assist in predicting plant diseases and insect outbreaks that are weather dependent.

Extension

Section staff prepared and published 57 newsletters, radio reports and fact sheets. The section also coordinated the Manitoba activities of the National Soil Conservation Week, which included placement of a newspaper supplement, information kits to schools and service clubs and theologically related material distributed to 200 churches in Winnipeg.

Staff represented the department on the conservation districts commission, the river renewal committee, the water management policy committee and the climate advisory committee. Assistance was also provided to the headwater escarpment storage study and the soil and water planning schemes for five conservation districts.

Five Agri-Food custom soil sampling projects were provided with technical support, as were nine tillage projects and the peatlands project.

Soil Survey

The Manitoba soil survey unit provides a systematic inventory and evaluation of Manitoba soil resources in a continuing program supported jointly by Manitoba Agriculture and Agriculture Canada. The major function of the soil survey continues to be the provision of essential soil resource data and related research. Land evaluations for use by the public and government departments for land use planning and land management are also conducted.

The 1986-87 survey inventory program concentrated primarily on detailed resurvey and land evaluation of selected areas in southern Manitoba. Total area involved was 417,500 hectares (1,031,660 acres). The surveys included agricultural resurveys for special crop production, soil management and land use planning, in the municipalities of South Norfolk, Victoria and Swan River. The detailed soil survey report was published for part of the L.G.D. of Stuartburn and the R.M.s of La Broquerie and Ste. Anne.

The soil survey is involved in developing a data base for land evaluation through the ongoing program of detailed resurveys, and through long term monitoring programs of soil temperatures, soil moisture and climate relations. Soil survey data provides input for the development of various soil-climate based crop growth and yield models for quantitative agricultural land evaluation.

Land Use Planning

Section staff and regional land resource specialists represented agricultural interests in evaluating developments affecting agricultural land and subdivision, and land use issues relating to the Planning Act and provincial land use policies. Assistance and advice was given to planning districts and municipalities, in formulating basic planning statements and development plans.

Major activities included studies on re-routing the Winnipeg-Selkirk highway, on four major hydro transmission line routes, abandoned rail line property, and the siting of a proposed potash mine. In addition, major inputs were provided on implications for agriculture in the new Environment Act, on major water policies for the province and on proposed year-round land application of sewage sludge.

Land Planning and Development

Staff provide service to departmental and other government staff, relative to agricultural use of land resources, with emphasis on the crown land of central and northern Manitoba. This activity is carried out through a process involving the Provincial Land Use Committee and the Crown Land Classification Committee.

Along with other development programs, a project on quantity crop yield by soil type and by management practice, is being carried out. An operational computer program has been written for the project and resulting data will be used in making on-farm crop management decisions and crop selection decisions.

As part of the northern development program, staff evaluate crops and agricultural practices proposed for northern areas. In addition, they support selected projects with potential for producing more food in the north and enhancing the quality of living in that portion of Manitoba.

Currently a small scale land development and soil management project is underway at Wabowden. Also, a multi-resource study on crown land in the Saint Lakes area involves forestry, agriculture, wildlife, and in a secondary way, recreation and fisheries.

Agricultural Crown Lands

The Agricultural Crown Lands Branch administers the agricultural use of approximately 1.6 million hectares (1.8 million acres) of provincial crown land. A high proportion of this land is utilized for the production of forage crops, providing a significant base for the province's beef industry.

Forage leases are allocated to Manitoba farmers and ranchers on the basis of need, established by an allocation system.

An agricultural crown land advisory committee is established to receive complaints from lessees regarding the application of branch policy. A total of 53 allocation appeals were held during the year, with 29 of them upheld and 24 changed by the appeal process.

The Agricultural Crown Lands Branch also administers 99,300 hectares (248,220 acres) of land under an administrative agreement with nine local government districts. These lands are administered under regular

branch policy and are eligible for all programs, including the crown land improvement program.

Leases and Permits

The total number of forage lease dispositions decreased by 57 in 1986 and the total area under forage lease decreased by 1,028 hectares (2,570 acres).

In 1986 there were 56 in-family transfers of leases involving 271 parcels of land. There were also seven unit transfers in 1986 involving 38 parcels of land.

Voluntary surrenders were actioned on 75 leases involving 181 parcels. There were 18 leases cancelled for non-payment of rent and 10 leases cancelled for non-use. Parcels of land advertised for re-allocation in 1986 numbered 468.

Crown Land Improvement Program

The Crown land improvement program provides financial assistance to lessees wishing to develop and improve suitable crown land. Payments are made to lessees upon completion of each phase of land development.

In 1986, a total of 949 clients were involved on 1,883 quarters of land. During the year 2,200 hectares (5,660 acres) were cleared, 3,045 hectares (7,540 acres) were broken and 2,640 hectares (6,526 acres) prepared for seeding, at a cost of \$433,028.

Purchase of Improvements

When a lease expires or is terminated voluntarily, structures such as fences, shelters, forage stands, corrals, and watering facilities are purchased by the Province from the lessee. The total of improvements purchased in 1986 was \$22,890. Crown-owned improvements valued at \$26,963 were sold to lessees acquiring lands in 1986.

Table 4
Leases and Permits — 1986

Type	Number	Hectares	Acres
Forage Leases	2,584	637,850	1,578,836
Casual Grazing Permits	66	3,544	8,772
Renewable Grazing Permits	155	6,000	14,872
Renewable Hay Permits	1,192	63,090	156,162
Casual Hay Permits	356	19,500	48,282
Cash Rental Agricultural Leases	231	23,060	57,085
Special Leases	8	523	1,300
Totals	4,592	753,569	1,865,311

Community Pastures

There are 24 community pastures covering 177,152 hectares (437,743 acres) in Manitoba. Clients are charged a user fee to recover the annual operating cost of the pastures.

Table 5
Community Pasture Statistics

Operating Pastures	24
Hectares (acres)	177,152 (437,743)
Patrons	1,038
Cattle & calves	56,912
Horses & colts	2,067
Breeding Cows	21,047

Land Use and Planning

Extensive land use studies and planning were carried out during the year. Many of these were carried out for rural municipalities, local government districts and other specific areas.

Studies in 1986 included projects on determining degree and extent of salinity, land capability reviews, land use and timber harvesting, public access to leased crown land and requirements for crown land communication and strategy.

Crown land plans were completed for eleven planning districts and municipalities and progress was made on 14 others. Additional studies involved determining effect of harvest systems on the yields of saline meadows, the cost of removing stumps, low cost brush control and tame forage yield monitoring.

Staff were involved in the preparation of lessons for Forages '87, in the developing of the department's forage strategy and in the task force group study on beef and forage extension programs.

Insect Control

Extension activities in entomology are carried out to make people more aware of safe, effective methods of pest management and the potential hazards which could result from the misuse of insecticides. Servicing enquiries from field staff, dealers, applicators and farmers requesting insect identifications and control information is the major activity during the growing season. Economic threshold guidelines and control recommendations were provided in various insect control

bulletins. During the year, 24 issues of the Manitoba Insect Report were forwarded to approximately 1,200 persons advising on, or directly involved in, insect pest management. Field surveys were carried out on a regular basis during the growing season to provide early warning of potential infestation of crop pests.

Crop Insect Infestations

Grasshoppers — Although the grasshopper forecast for 1986 strongly indicated that grasshoppers would continue to be a major threat to crops, favourable growing conditions drastically reduced the need for control measures to protect crops. In contrast to an estimated 100,00 hectares (240 000 ac) sprayed in 1985, less than 15,000 hectares (35,000 ac) were sprayed in 1986. As in the past four years, the most severe infestations occurred in southwest Manitoba.

European Corn Borer — Populations of this insect continued to decline with only a few isolated fields carrying infestations that warranted control. Monitoring of this insect continues.

European Skipper — Heavy concentrations of European Skipper larvae occurred in several timothy seed fields in the Arborg-Riverton area. This is the first time the insect has occurred in economic numbers in Manitoba. The severely affected areas were small and no control measures were undertaken.

Other Insect Pests — Other pests such as flea beetles, armyworms, cutworms, sunflower beetles and aphids occurred at low levels and required minimal or no control measures. Heavy cankerworm populations occurred in the town park at Dauphin and control measures were carried out.

Field Surveys and Monitoring

Grasshoppers — Staff carried out a province-wide survey of adult grasshoppers in early August to gather data for a 1987 forecast. An egg survey was also carried out in October to better assess the potential for 1987.

The 1987 forecast indicates that there will be a marked reduction in both area and severity of infestations compared to the past several years. The forecast area of infestation covers only 25 per cent of the area infested in 1986, while the expected severity will decrease by 70 per cent. The area most affected by grasshoppers remains the southwestern part of the province.

Bertha Armyworm — A field survey was undertaken in the Swan River area for Bertha armyworm. Populations of armyworms were found in several canola fields, however, the numbers were well below economic threshold levels and no spraying for control of Bertha armyworms took place.

Wheat Midge — A province-wide survey continued for the third consecutive year. The midge continues to be present at low levels in all the wheat growing areas of the province. A few samples contained wheat midge levels that may have caused significant yield loss. Overall, the insect at present is of minor importance, but does have potential to be serious given the right conditions.

Sunflower Midge — A total of 49 fields were surveyed in 1986. The area surveyed included the Red River Valley and the eastern region as far east as Steinbach. There was an increase in moderate and severe categories from the previous year. Fourteen of the surveyed fields were classed as severe.

Sunflower Moth — A survey was carried out in an area extending across the Red River Valley from Niverville to Graysville. Five fields were surveyed and the percentage of damaged seeds was calculated. The damage ranged from less than one per cent to 30 per cent with an average of 8.5 per cent.

Hessian Fly — In late August and early September, several reports were received from farmers and Manitoba Crop Insurance agents who had observed fairly high levels of hessian fly damage to wheat fields in the Red River Valley. A random survey carried out in the area between Morris and Sperling in mid-September confirmed the reports. In eight fields surveyed, infestation levels ranged from 3.4 to 9.4 per cent. In most years, hessian fly damage is difficult to find. Although infestation levels were much higher than normal, actual losses caused by hessian fly damage appeared to be quite low, since most of the bent or broken wheat stalks are picked up when the crop is swathed.

Field Research

Wheat Midge — For the third year in a row damage assessment surveys were carried out in the Swan River area to determine the economic impact of wheat midge on wheat production.

Samples of wheat heads were obtained in the eastern, interlake, central and Swan River areas. Only a few samples had high midge levels, and it appears that between 10 and 15 per cent wheat midge damage may be significant in terms of yield loss, based on the three-year study.

Sunflower Moth — Twenty-five heads from a heavily infested field in the Graysville area were collected. The heads were dissected and analyzed for damaged kernels. The damaged and undamaged seeds were weighed.

No relationship could be found between the amount of damaged seeds in a head and the average seed weight. The percent of damaged seeds ranged from 2.7 to 38.6 per cent.

Greenhouse Insect Monitoring — Yellow sticky traps were installed in two greenhouses. The traps were replaced approximately every two weeks from January to March. The insects caught were identified and recorded.

Municipal Grasshopper Control Assistance Policy — The Department reimbursed municipalities for insecticides which were applied to roadsides and other public property for grasshopper control. A total of \$48,288 was paid to nineteen municipalities.

Pesticides Control

A total of 910 retail pesticide dealers and 460 commercial pesticide applicators were licensed in 1986 under the Pesticides and Fertilizers Control Act. New dealers and applicators qualified for their licences by attending training courses and successfully completing written examinations. Applicators are being recalled to training courses every four years.

Dealer and Applicator Training — Four one-day training courses for pesticide dealers were attended by 91 dealers. One-day training courses were held for aerial applicators (34), ground applicators (17), right-of-way applicators (47), landscape pest control operators (126), structural pest control operators (38), golf course superintendents (60), forestry pest control workers (40) and biting fly controllers (30). A separate training program was held for 14 new veterinarians.

Seven persons were issued provisional licences and are required to attend courses in 1987. Dealers and applicators were provided with updated educational material on insect, weed, plant disease, vertebrate pest control and chemical safety.

Enforcement — One aerial applicator was prosecuted for operating as an unlicensed applicator in 1986.

Fifty-five unlicensed outlets were checked. Most were found to be out of business and the remainder complied with licensing.

Two aerial applicators were visited in cooperation with Federal Plant Products to gather survey information, which is used at aerial applicator training courses.

Chemical Damage Complaints — The number of complaints were down from previous years. Eight herbicides and one insecticide damage complaints were handled by staff.

Cholinesterase Blood Tests — This program is operated in cooperation with the Department of Health. It is offered free of charge to anyone who may be handling organophosphate insecticides. There were five participants and 16 blood samples analyzed during the year.

Training and Development

Farm Management

The main objective of the Department's farm management section is to enhance the efficiency and growth of the farm sector by providing farm business management services, by developing resource materials, by developing a training program and by extending information to staff and farmers.

Staff input was directed towards the development and production of material for Farm Business Group training programs. A series of three second-year lessons and a workbook were revised. In addition, one optional lesson, along with audio-visuals, worksheets, and training and instructor's manuals, were produced. Five in-service training courses at the regional level and one provincial seminar were conducted. Regional staff organized groups and delivered instructional material to almost 300 farm operators and farm couples.

Extensive work was completed on software programs. Thirteen agricultural software programs were developed for research, investigation, counselling and advising farmers. An estimated 48 agricultural software programs developed by the section were being used in the farm management program. Other work was done in standardizing existing software programs and a software distribution policy for public use was developed and introduced. Software programs under development during the year included enterprise selection, financing, cost analysis, loan alternatives, machinery costs, farm records, planning, and partial budgeting analysis.

Budget guideline worksheets for projecting farm plans were developed and revised. In total, 22,450 copies of these guidelines on 10 farm enterprises were distributed to farmers.

Staff investigated, researched, and reported on the following topics: fish farming policies, financial situations, honey production, immigration, Farmstart loan program, stress counselling, irrigation, Bankruptcy Act, a number of accounting software programs, leases, rural transition program, agricultural financing alternatives, fuel tax rebate, mutual funds, Family Farm Protection Act, beef extension programs, price charting and seasonal price cycles, program strategy development, cost of production information, and income tax.

During the year, viability assessments were completed on 20 immigration applications. A new procedure was initiated, where the "agrologist" reports are prepared by professional agrologists and the assessment on viability completed by staff.

Farm management staff cooperated with and maintained contact with a wide range of regional, provincial and national organizations and programs associated with farm management services.

Regional Activities

The difficult financial situation on many farms continued to require increased staff time in a counselling role. Some farm management specialists spent up to 90 per cent of their time providing in-depth financial counselling. The increased counselling load resulted, in part, from more Manitoba farmers being aware of the department's service and from financial institutions referring clients to department staff for assistance.

Stress continued to be a problem in many farm families, even where financial concerns were only moderately high. While considerable direct counselling was done on this problem, it was found greater numbers could be handled and assisted through group events such as stress seminars and farm family seminars.

The farm business group program continued to operate successfully in all regions, providing several hundred operators and farm couples with an opportunity to increase their skills in goal setting, financial planning, marketing and general farm business planning. Instruction in this program was carried out mainly by the agricultural representative and home economist, and supported by regional farm management specialists.

Other farm management regional services involved advice and assistance on a wide range of topics including general farm planning, farm financing, farm accounting, record keeping, business arrangements, estate planning, on-farm computer use, marketing, farm law and insurance. In addition to individual contacts and group events with farmers, guidance and advice was provided to many producer groups, church organizations and other community groups.

4-H and Youth

The objective of the 4-H program is to promote leadership, citizenship, responsibility and independence in rural and northern Manitobans through achievement in skill development projects within rural and northern community-based clubs.

The 4-H structure extends from the grassroots level to a national organization. Volunteer councils exist at the district, regional and provincial levels, with representation on the Canadian 4-H Council. These councils address programming needs for their specific areas. Manitoba Agriculture staff, which includes program assistants, home economics, agricultural representatives, regional 4-H specialists and staff in the Winnipeg 4-H office, provide support to their respective councils.

Provincial Activities

The Winnipeg 4-H office is responsible for coordinating all provincial, national and international activities. The office also provides support to district and regional 4-H staff, while directly supervising the northern 4-H program.

The Manitoba 4-H Council, including leaders, senior members and department representatives, coordinates most of its activities through a number of committees. The 75th anniversary committee was very busy through the year planning major activities celebrating 75 years of club work in Manitoba. These include a 4-H history book, a provincial 4-H happening and a commemorative stamp.

In the area of leadership development a new bulletin called Leader Connection was developed, leadership courses were updated and shortened and Manitoba 4-H leaders were recognized through the Canadian 4-H Council. The Manitoba Council, with the help of corporate sponsors and donations, provided 109 members and 41 leaders with travel opportunities within and outside the province.

With the support of P.F.R.A. a new member program was started called Conservation Camp In Alberta and a Soil Conservation Trip was provided for 20 members and adults. C.N. also assisted in expanding travel experiences by sponsoring the "Future Growth" conference in Saskatoon, which was attended by 12 Manitoba delegates.

Other provincial 4-H events offered to members included: horse show, dairy show, 4-H livestock judging, sugar beet achievement, clothing speaks conference, the provincial public speaking contest, the provincial demonstration competition and the City Survival Weekend.

Four Manitoba 4-H'ers were awarded scholarships from Canadian National Exhibition (\$1,000), Hoechst Canada (\$500), Petro Canada Youth Leadership (\$1,000) and Manitoba Ambassadors (\$100).

In the public relations area a Manitoba 4-H Week was proclaimed and hand-out public relations materials were produced and distributed. The slogan remained "4-H for Friends, Fun and Learning".

Twenty-six 4-H'ers belong to Manitoba 4-H Ambassadors. They made significant contributions through a series of club, district and regional 4-H events, several provincial events and activities and they sponsored the Peggy Coverdale Memorial Scholarship.

The Manitoba 4-H Foundation, now in its second year, has increased its awareness in 4-H circles, with 68 donors providing a total of \$8,046. The foundation is also the official supporter of the 75th anniversary projects.

During the year 600 copies of the bi-yearly magazine Contact were produced and distributed, along with production of 500 copies of the Manitoba 4-H Review.

4-H Projects

Manitoba 4-H has 5,298 members in 293 clubs, guided by 2,167 adult volunteers. During the year the Department supplied 110,000 copies of project manuals, record books and resource material to a project enrollment of 7,465.

This year new materials were provided in several areas including: livestock judging videos, a herbs project guide, public speaking judges guide and a project selection guide.

Staff Training

Staff training included a 4-H Update program for 48 department staff, development sessions with training components in the area of computers and marketing and an extensive input from the section into both the 4-H and the human resources strategies. During the year staff attended courses in team building, basics of management, identifying personalities, being a professional and stress management. Winnipeg staff also presented "Motivation of Volunteers" at five regional workshops for the Prince Edward Island Women's Institute.

Regional 4-H Activities

All regions carried out an extensive program at the district and regional levels. Activities were varied and wide ranging for a membership which stayed relatively static in most regions. Included in the general activities were sporting events, camps, rallies, member training, leader training, travel programs and the basic project work.

In the Northwest region 926 members in 43 clubs guided by 436 leaders carried out an active year-long program. Major district activities included club officer workshops, leader meetings and exchange programs. Regional activities included communication seminars, horse shows, leadership workshops, and special programs for senior members.

A strong 4-H program in the Southwest region resulted in 1,660 4-H members taking an active part in all established programs and several new projects. Staff noted the self-esteem, leadership and communication skills provided to rural youth and their families resulted in positive growth and support at a time of increasing stress for many farm families.

Interlake 4-H clubs continued to make communications their major emphasis during the year and staff working with the clubs felt the results were most worthwhile. A

new 4-H project on financial management developed in the Interlake was adopted province-wide this year.

Communication projects were also highlighted by the 524 members in the Eastern region this year. New initiatives in the region included the formation of an animal health club, a first for the province.

Northern 4-H Program

The Northern 4-H program boasts a membership of 237, supported by 61 leaders in 4-H clubs located at York Landing, Thompson, Leaf Rapids, Cross Lake, Carrot Valley, The Pas, Grand Rapids, Flin Flon, Easterville and Snow Lake.

In addition to their local project meetings, members participated in a variety of regional and provincial activities including: a town clean-up campaign, Camp Wanacumbac, regional and provincial public speaking, communications weekend, an exchange program with Wisconsin, and a project involving the Thompson zoo. Northern leaders participated in a leaders workshop, a weekend salute and the annual meeting of the Manitoba 4-H Council.

Home Economics

During the past year the Home Economics Section was transferred from the Health Promotion Directorate, Manitoba Health to the Technical Services and Training Branch, Manitoba Agriculture. This section co-ordinates home economics services in Manitoba and is responsible for the direction and quality of home economics programs offered by 17 field home economists in Manitoba Agriculture and 10 field home economists in Manitoba Health. Through a team approach field staff and the section develop, implement and evaluate educational and remedial programs in family living and well-being, financial management, nutrition and family resource management.

The objective of the Home Economics program is to assist Manitoba families in applying knowledge and skills to improve family lifestyle and well-being through optimum use of physical and human resources. In the past year the major target groups for home economics programs have been young families, farm families, and those at risk due to age, economic status or nutritional status.

In 1986/87 a total of 56,840 contacts were made by Agriculture home economists.

Financial Management — programs implemented by home economists in Manitoba emphasized defining the family financial situation, identifying alternatives and taking action appropriate to the circumstances and family goals. The target groups continue to be families

at risk financially, young beginning families and young farm families. Strategies include group work, one-to-one counselling and the use of media.

Group work covered a number of topics including: basic budgeting, wills and estate planning, household inventories, women and finance, consumer rights and responsibilities, banking, use of credit, kids and money, recordkeeping, planning spending, farm family law and business arrangements, and premarriage money management. Evaluations indicate that those attending the sessions found the information useful and in many cases indicated a decision to change money management habits.

Home economists continue to be involved as instructors in year 1 and year 2 of the farm business group program. They have also been co-ordinators in the development of farm machinery courses for farm women, a cooperative venture with Assiniboine Community College and Canada Employment Centre. Home economists have also been involved in the development and implementation of the 4-H project Making Your Money Count.

During the year department home economists made 7,080 financial management contacts throughout the province.

Family Living and Well-Being — has become a significant area of home economics programming. The purpose of this program is to help families develop skills to adapt to changing lifestyles and maximize family strengths. In the past year information in family living was provided by home economists in group sessions, through the use of the media and a home study.

A highlight of the year involving Home Economists was the very successful Manitoba Farm Women's Conference. Video tapes made at the conference continue to be requested by groups and individuals.

Another initiative in this area was the home study Farm Families '87 — Living Successfully. Approximately 500 people enrolled in the home study. Evaluations documented the value of the contents and the home study approach for this topic area. In addition, Grainews published the lesson series in their publication.

At the district and regional levels home economists played a key role in organizing farm family seminars and local farm women's conferences. In addition, they provided sessions on time management, stress management, family communication, farm family business meetings, communication assertiveness, self-esteem and identifying personal strengths to various groups.

In Family Living, 4,062 contacts were made by Agriculture home economists.

Nutrition — is a major program component for Agriculture home economists. The objective of the nutrition program is that Manitoba families will improve and maintain food habits to attain optimum nutrition status. Strategies used involve group work, individual work, the use of the media and newsletters.

Programs targeted at the needs of young families included prenatal nutrition classes, consultation with day care and preschool care providers, nursery school newsletter and preschool menu planning session.

School age and adult nutrition programs dovetail with the stress management program in Family Living and Well-Being with topics such as weight management, salt in the diet, fibre in the diet, microwave cooking, relationship of diet, exercise and stress and nutritious snacks. Topics such as basic nutrition, food buymanship and food preservation relate to the objectives of the financial management program.

In nutrition a total of 21,746 contacts were made by Agriculture home economists.

Family Resource Management — topics included clothing and textiles, basic living skills and housing. The objective is to have Manitoba families make decisions and utilize resources to meet the basic needs for food, clothing and shelter, and attain an optimum standard of living.

The bulk of work in the housing program was in response to consumer enquiries. Buymanship and selection in furnishings and accommodation with limited funds was the main concern. Information was provided in group courses and through the media on sewing curtains and draperies, home improvements and repairs, furnishing for savings, office space in the home and home decorating.

This program reached 1,550 Manitobans.

Clothing and Textiles — involved mainly response to consumer enquiries. Requests related to buymanship and selection of clothing, notions, sewing machines, and other equipment such as sergers. Group sessions were provided on basic sewing, active wear, children's wear and chemical safety related clothing. The area of chemical safety related to clothing is of special interest and was one of the topics at the Manitoba Farm Women's Conference which generated a great deal of comment.

In Clothing and Textile areas, 3,134 contacts were made.

Basic Living Skills — Program was presented through 15 workshops held throughout the Province. Target clientele included those recovering from mental illness, physically handicapped, adolescents in care, special needs students and new immigrants. Evaluation of this program consistently emphasized its value.

Agricultural Extension Centre

The Agricultural Extension Centre, located in Brandon, continued to coordinate adult education and extension training activities for many rural Manitobans. During the year a total of 790 events were held at that location, involving a total attendance of 24,000.

The Centre sponsored 24 courses during the year with 2,000 participants. A further 85 events of more than one day were sponsored by organizations other than the Extension Centre and involved 3,380 people. Additional events of one day or less numbered 417.

A new and successful course development this year was the series of six evening programs "Farming '87". Participants chose their own topics, which ranged widely.

Another new development involved two U.S. produced veterinary programs telecast via satellite, which were taped off air, shown at the Centre and used by other groups.

The Extension Centre continued to provide dining room and residence services when required. This activity resulted in 20,000 meals being served.

Instructors for the Centre-sponsored courses were drawn from Manitoba Agriculture, Agriculture Canada, University of Manitoba and from the farm sector. A total of 128 instructors were involved this year with 48 of them being farmers.

To keep the course program current and relevant, feedback and evaluation was encouraged from participants. This resulted in some emphasis being placed on farm family courses.

The regular issue of "Ag Action" helped maintain interest and participation in Extension Centre events. In addition, the media showed a continuing interest in the many programs, with three to four media representatives attending each course.

Agricultural Employment

Canada and Manitoba, represented by the departments of Employment and Immigration Canada and Manitoba Agriculture, have an agreement called the Canada-Manitoba Agricultural Employment Development Agreement. This agreement establishes a committee known as the Canada Manitoba Agricultural Employment Committee. This committee has an overall responsibility to:

- a) Identify training needs and recommend strategies related to agricultural employment.

- b) Establish operating guidelines and policies to direct Local Agricultural Employment Boards. Through these boards the committee will evaluate activities carried out by the Canada Farm Labour Pools.
- c) Establish wage, working and living guidelines for agricultural workers to be applied through the Canada Farm Labour Pools.

The committee has further responsibilities to recommend on research projects related to farm labour and to provide advice and representation to the Canada-Manitoba Labour Market Needs Committee.

Agricultural Training

Assiniboine Community College offered agricultural training throughout Manitoba in 1986/87, responding to producer requests through either local agricultural offices or the Canada Farm Labour Pools. The College provided 18 complete courses with 21 different subjects offered at 25 different locations. There was an enrollment of 441 with some students enrolled in more than one course for a total of 565 students. Of the 441 enrolled, 262 were women. There were 196 women in agricultural programs designed for women with a further 66 women in other agricultural programs. Of note is the farm equipment operators course for women, offered 11 different times.

Offshore Workers

In 1986, 32 Mexican workers were employed on three vegetable farms in the Portage la Prairie area. The growers and the Manitoba Farm Workers Association agreed on a joint recommendation to government as to how many offshore workers should come into Manitoba.

In another area seven custom harvester units consisting of 16 combines and 17 trucks came into Manitoba to harvest on nine Manitoba farms.

Portage Project — Continuing Programs

- A daily transportation service, funded through Employment & Immigration Canada brought workers to work on vegetable farms in the Portage area.
- Support services, such as child care, money management, temporary accommodations and employee/employer discussion were available to workers through the Portage Friendship Centre.
- The Headingley and Portage Correctional Institutions provided people, on an ad hoc basis, for short term field or warehouse work.

Agricultural Exchange Program

The International Agricultural Exchange Association (I.A.E.A.) had 59 trainees on Manitoba farms in 1986. Shortly after their April arrival in Canada, they attend a five day orientation seminar to familiarize them with Canadian agricultural practices, laws and customs. These trainees then proceed to their host family farms both to live as a family member and work as an employee/trainee. They take a three to four week vacation in midsummer to travel throughout North America.

Twenty-nine Manitobans left on I.A.E.A. exchanges to Europe, Australia and New Zealand in 1986.

Agricultural Societies

In 1986 there were 63 active agricultural societies in Manitoba. Agricultural societies have contributed greatly to the successful development of rural communities in Manitoba in the past hundred years.

Manitoba Agriculture supported agricultural societies in 1986 through grants, as follows: buildings and improvements \$142,000; memberships \$7,400; prize money \$232,000; 4-H activities \$16,300; judges expenses \$46,500; and horse race meets \$21,524.

King farmer competitions and tractor pulls are two of several new features being adopted by many societies. Also, workshops and seminars are increasing in numbers as societies become more concerned about the educational aspect of their mandate.

The fifth annual Agricultural Society Conference was highlighted by a move to create a new organization to be known as the Manitoba Association of Agricultural Societies. It is intended that this organization will assure the member societies of having a stronger voice in decisions affecting their future.

The third annual Canada Packers/Agricultural Societies quilt competition saw Mrs. Betty Klassen of Win-kler named winner. Donations from agricultural societies support two bursaries, resulting in the Evelyn Ames Bursary being awarded to Alison Delf of Rathwell and the N.C. MacKay Bursary going to Michel Durand of Notre Dame de Lourdes.

Manitoba Agricultural Hall of Fame

The Manitoba Hall of Fame was established in 1976 to formally and publicly recognize individuals who have made outstanding contributions to the betterment of agriculture and rural living in Manitoba. Manitoba Agriculture assists in the financing of the Hall by providing an annual grant in the amount of \$12,400, paid on a matching two for one formula. During the year plans

were made for moving the Hall of Fame from the Keystone Centre to the Agricultural Extension Centre in Brandon.

Keystone Centre — Brandon

Built in 1973, the Keystone Agricultural and Recreational Centre serves the agricultural, recreational and entertainment needs of Brandon and surrounding districts. Under the Keystone Agreement, the Province of Manitoba and the City of Brandon share equally in any operating deficit. In 1986, the operating deficit was \$93,973.06, making the provincial grant \$46,986.53.

Horse Race Meets

During the year, harness horse racing meets were held at Carberry, Pilot Mound, Deloraine, Glenboro, Holland, Killarney, Miami, Minnedosa, Rosburn, Russell, Dauphin, Portage la Prairie and Virden. Each society was supported to a maximum of \$10,000 per day. This was made possible through the retention of monies collected from pari-mutuel betting, plus a supplemental grant of 2.5 per cent of the total betting pool. The total supplemental grant in 1986 for this purpose was \$21,524.

Manitoba Women's Institute

The Manitoba Women's Institute involved a membership of 1,532 active members in 1986, located in 96 local institutes throughout the province. The Women's Institutes provided valuable family and community educational and social programs to their membership.

The provincial board work very closely with the Home Economics section and in the field with district home economists, providing leadership and social support in many areas of general need and concern.

Manitoba Agriculture's annual grant to the Manitoba Women's Institutes in 1986 was \$31,900.

Manitoba Farm Vacations Association

Organized in 1972, this association, through its 54 host families, offers prospective vacationers an opportunity to enjoy first hand, rural mid-western hospitality.

Host farmers offer a wide selection of what farming is all about, ranging from large cattle ranches or major dairy operations, to grain and mixed farms of all sizes. Involved farm families supplement farm income in a small way and enjoy the social interaction.

During 1986, the 54 active host families in Manitoba hosted over nine thousand guests. School tours numbered 304 with over 19,000 students visiting host farms. During 1986, the Farm Vacation Association received a provincial grant of \$23,700.

Century Family Farm Program

In 1981, the Century Family Farm program was established by the Department of Agriculture. Any family currently operating and residing on a farm which has been operated and occupied continuously by the family for one hundred years or more can apply for, and on proof of information, receive a gate sign and certificates recognizing their accomplishment. To date a total of 543 families have been acknowledged through this program. In 1986, 18 presentations were made to Century Family Farms.